

Response to Comments

Chapter 9. Standard Responses

**Standard Responses to Public Comments on the Draft Program
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Standard Response 1.1.5	The planning and implementation of public transit systems are under the jurisdiction of local and regional agencies which are responsible for congestion management programs and land use planning, as well as transit planning. The Authority is charged to develop a proposed HST network that is fully coordinated with other public transportation systems. (See CA. Public Utility Code section 185030 et seq.) Coordination with public transit agencies will be continued in future project specific studies and planning for stations along HST alignments.
Standard Response 1.1.33	The HST system is proposed to primarily serve intercity trips rather than local commuter trips. The HST system is forecast to carry 42-68 million (12 million of which are estimated to be long distance commute trips) passengers annually by 2020, generate an operational surplus, and have benefits which considerably exceed the costs of the system.
Standard Response 1.1.81	The Authority and FRA acknowledge and respect Native American concerns and interests.
Standard Response 1.1.105	Please see standard response 6.3.1 in regards to the mountain crossing between the Bay Area and the Central Valley. This Program EIR/EIS and the planned Bay Area to Merced Program EIR/EIS are both planning-level documents. Planning level decisions are under review and the environmental analysis, engineering design rely primarily on existing data. Detailed studies regarding geology, costs, protection of wildlife habitat and species and other environmental impacts will be done as part of project-specific analysis should the HST project be advanced.
Standard Response 1.1.108	<p>If the HST project is to move forward in California, the Authority believes that the private sector will contribute to its financing. The Authority supports private-sector participation in the implementation and operations of HST in California to the greatest degree possible. In its June 2000 Business Plan, the Authority states, "the public's investment should be limited to that which is necessary to ensure the construction of the basic system" and "private-sector funding to construct major elements of the system would be both practicable and advisable" (Introduction Letter to Governor and Legislature). The Authority's considerable research into global experience in the development of high-speed ground transportation does not support the notion that the proposed HST could be completely privately financed and it would be unrealistic to promote such an approach in California.</p> <p>Feasibility studies by both the Commission (1993-1996) and the Authority (1997-2000) showed that while HST in California could operate at a revenue surplus, most of the capital costs of the initial system would have to be publicly financed. Both the Commission and the Authority investigated the potential for freight services</p>

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	that would be compatible with the HST passenger services. These investigations concluded that while freight services on the HST tracks could operate at a surplus, the revenue contribution from such freight would be small in comparison to passenger services. The Authority's June 2000 Business Plan assumed an operating income from freight of about \$10 million by 2020, and more than \$16 million by 2030 (Financial Plan, PFM, November 2, 1999). Please also see standard response 2.7.3.
Standard Response 1.1.112	The Draft EIR/EIS evaluates a state-sponsored proposal to be included in state and regional transportation plans in the future at an appropriate time. The proposed HST system and related projects would ultimately be reflected in local congestion management CIPs (Gov. Code section 65088 et seq.) and county transportation plans. The Authority encourages Counties to include the pertinent HST alignment and station options, according to the preferred system described in the Final Program EIR/EIS, in the next update of the County transportation plans to support corridor preservation activities.
Standard Response 2.1.1	<p>As noted in Chapter 2 Alternatives of the Draft Program EIR/EIS, the ridership forecasts that were used for the document were developed in preparation of the Authority's 1999-2000 Business Plan and are the "best projections currently available for a representative HST system." Ridership for this system was estimated to vary between 42 million passengers on the low end and 68 million passengers on the high end for 2020, with a potential for considerably higher ridership beyond 2020. For the Program EIR/EIS, the high-end ridership numbers provided a reasonable representation of the total capacity of the proposed system and serves as a representative high-end scenario for analyzing the potential environmental impacts from the physical and operational aspects of the system alternatives in 2020. In some specific analyses where high HST ridership would result in potential benefits (e.g., energy, air quality, and transportation), potential impacts associated with the low-end forecasts were included.</p> <p>The ridership forecasts presented in the Authority's 1999-2000 Business Plan were based upon extensive analysis done for the Authority and the California Intercity HSR Commission derived using accepted, established methodology and appropriate and best available inputs. The level of detail of these forecasts is appropriate for use in this program-level environmental process.</p> <p>The models used to forecast HSR ridership explicitly account for travel time (both intercity travel time and access and egress time to/from stations/airports), service frequency, and cost (both the fare and costs associated with accessing the HST station or airport). The models also incorporate the perceived value of "quality of service" advantages between HST and air, such as more spacious seating, more onboard luggage space, and better service reliability. The diversion percentages therefore reflect the relative competitiveness of HSR based on the combination of all of these factors, not just travel time. In many markets, HST would</p>

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	<p>provide service that is cheaper, more frequent, and more easily accessible than air. Thus even where total travel times are comparable between air and HST, HST may have other advantages that make it very competitive, and thus it can reasonably be expected to divert significant numbers of air trips.</p> <p>The methodology used to produce the forecasts also explicitly accounts for differences in the substitutability of the different modes for HST by using separate diversion models for each existing mode. Moreover, the models further distinguish between short distance and long distance auto trips, taking into account the fact that short distance auto trips are less likely to be diverted. Similarly, the methodology explicitly distinguishes between auto travelers needing their car at the destination (for whom the additional time and cost associated with renting a car is added to the time and cost of the HST mode), and those that need to make stops along the way (who are assumed not to divert to HST at all). Notwithstanding the numbers shown in the modal cost comparison table, the forecasts used only the perceived cost of auto travel (as perceived by actual California motorists) when comparing the relative costs of auto and HST.</p> <p>Thus the methodology was very carefully designed to reflect the reality that it will be relatively more difficult to divert auto travelers to HST than air travelers. However, HST will provide a very significant travel time savings in many markets when compared to auto, and will offer very frequent and conveniently located service. Thus it is reasonable to assume that some amount of auto travelers would choose HST, even if auto is perceived to be cheaper. The forecasts reasonably reflect these considerations. While 56% of air trips are expected to be diverted to HST (in the Business Plan scenario), the models predict that only 7% of intercity auto trips would be diverted.</p> <p>The detailed ridership and revenue investigations of both the Authority and the California Intercity HSR Commission concluded that a statewide HST system would generate substantial ridership and that revenue from the HST system would be significantly higher than the cost to operate the system under a variety of fare assumptions. In regards to project viability, the Purpose and Need (Chapter 1) of the Draft Program EIR/EIS states that an objective of the HST system is to, "Develop an economically viable transportation system that can be implemented in phases by 2020, which would generate revenues in excess of operations and maintenance costs" (page 1-4). The EIR/EIS provides appropriate information for the program-level evaluation of potential environmental impacts of the proposed HST system and analyses and reports related to the Authority's Business Plan (see Chapter 12, "References") were used in preparation of the EIR/EIS. Comments about general financial viability, servicing bonds and other financial issues are beyond the scope of the environmental analysis. The Program EIR/EIS document need not provide a financing plan for the construction and operation of the system.</p>

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	<p>The total costs of owning and operating an automobile are shown on Table 3.2-17 of the Draft Program EIR/EIS (including depreciation, maintenance, repairs, taxes, insurance, etc.). The co-lead agencies believe that this table is appropriate for helping to provide an accurate comparison of the door-to-door costs per passenger for the different modes of transportation. However, for developing ridership and revenue forecasts, the co-lead agencies considered using perceived costs more appropriate. As stated in the Draft Program EIR/EIS as part of the reference to Table 3.2-17, "the ridership and revenue estimates for the Business Plan are based on the perceived costs of making an automobile trip (e.g., fuel) and do not include all of the true costs associated with owning and operating a vehicle." (Draft Program EIR/EIS, page 3.2-34)</p> <p>The co-lead agencies acknowledge that the proposed HST project is not consistent with all county plans including Alameda County's 2003 Congestion Management Capital Improvement Program. At this point in the program, it is assumed that costs for the HST project would be borne by state and federal funds.</p>
Standard Response 2.1.2	<p>HST systems have been generating operational surpluses in other countries for many years. In Japan and France, operational surpluses have been used to support and finance HST construction. In the United States, only Amtrak's Acela service on the Northeast Corridor (Boston to New York to Washington, D.C.) can be considered an HST service. Although the Acela service has maximum and average speeds that are considerably less than European and Asian HST systems, it is earning approximately \$0.65 per passenger mile in revenue exceeding operating costs. HST systems which primarily serve long-distance (100 to 500-mile-long) intercity trips between regions should not be confused with or compared to local transit rail systems (e.g., heavy rail systems like BART or the Los Angeles Red Line, light rail systems like Sacramento LRT, or the San Diego Trolley) that predominantly carry short-distance commuter trips within metropolitan areas. Throughout the world, nearly all local transit systems require public subsidies to sustain operations, but the same can not be said for intercity high-speed rail.</p> <p>In Europe and Asia, HST systems do not have a history of "cost overruns and overly optimistic revenue projections." While the Chunnel in Europe did experience considerable cost overruns, this project was one of the most unique and complex construction projects in the history of mankind and among high speed rail projects. The cost and ridership projections for most of the HST projects in Europe and Asia have been reasonably accurate. The Authority's ridership projections were prepared taking into account California's existing competitive intercity travel market. Although the forecasts were prepared before 9/11, this event would likely have a greater impact on air transportation (additional time needed for security and check in at airports) than for a potential HST service. Please also see standard responses 2.8.1 in regards to performance and safety.</p>

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	<p>The forecasts used in the Business Plan were based on the most up-to-date and accurate information available regarding the travel times and costs associated with the existing modes. While in general we can expect some variation in these values over time, it is unlikely that air fares or auto travel times in the largest California markets would be significantly reduced over time. While air fares have fallen substantially in many US air markets due to competition, and specifically due to the entry of low cost airlines, the major California air markets have for many years been highly competitive and fares have been significantly influenced by the presence of low cost carrier Southwest Airlines. These fares are already very low on a per mile basis, and the presence of competition from other carriers in these markets makes it likely that fares are already a level below which long term profitability can be sustained.</p> <p>Likewise, while a substantial increase in both population and auto trips is projected for the next twenty years, additions to highway capacity are not expected to keep up with this increase in demand. Thus congestion may get worse not better, making significant reductions in intercity travel times unrealistic within the planning horizon of the HST project. The auto costs used in producing the HST ridership forecasts reflect only the perceived cost of auto travel. These perceived costs, in turn, are likely to substantially reflect the prevailing cost of gasoline in the state, which was (at the time the forecasts were produced) already historically quite low in real terms (that is, when adjusted for inflation).</p>
Standard Response 2.1.6	<p>The Authority's June 2000 Business Plan concluded that while an HST system would generate passenger revenue that would exceed operating and maintenance costs, the initial capital costs of an HST system would need to be predominantly publicly financed. Please see standard responses 2.1.1 and 2.1.2 for information regarding the ridership and revenue forecasts prepared by the Authority, and for an explanation regarding the differences between HST services and light rail systems. It is not appropriate to compare the costs of local and regional rail transit systems, such as BART and VTA, with those of the proposed intercity HST system. The HST system is proposed to serve intercity trips between regions rather than local commuter trips.</p> <p>The Authority's consultant teams were selected through the State's competitive process. Six consulting teams with appropriate expertise were involved in the preparation of the Draft EIR/EIS, a program management team and five regional consulting teams (Bay Area to Merced, Sacramento to Bakersfield, Bakersfield to Los Angeles, Los Angeles to Orange County to San Diego, and Los Angeles to San Diego via Inland Empire). The Authority also consulted with the French National Railways (SNCF), DE Consult (the consulting part the German Railways), and Japan Railways Technical Services (JARTS) to obtain peer review of the work included in the Authority's Business Plan. These are the three entities with the most extensive experience regarding HST operations. The Draft Program EIR/EIS was available to the public in libraries and on the Internet for</p>

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	review for a 6-month period, in order to give ample opportunity for those interested to provide informed comments.
Standard Response 2.1.12	<p>The station sites recommended as preferred locations are all multi-modal transportation hubs that would provide links with local and regional transit, airports and highways. It is assumed that parking at the stations would be provided at market rates (no free parking). Each station site would have the potential to promote higher density, mixed-use, pedestrian oriented development around the station. As the proposed HST system proceeds to more detailed study, local government would be expected to provide through planning and zoning for transit-oriented development around HST station locations, and to finance (e.g., through value capture or other financing techniques) and to maintain the public spaces needed to support the pedestrian traffic generated by hub stations if they are to have a HST station. The ultimate location and the configuration of stations cannot be determined at this time; this would occur during subsequent project-level environmental processes. Recommendations are made on station options to allow the Authority to pursue proposed station development at or near that location in future project specific studies. It is possible and likely that some of the preferred stations included in the Final Program EIR/EIS will not be built. Please see Section 6B of the Final Program EIR/EIS for further details regarding the Authority's transit-oriented development (TOD) policies and general principles for HST station area development.</p>
Standard Response 2.2.1	<p>In order to make a comparative analysis, the Program EIR/EIS describes the No Project Alternative as a continuation of the existing transportation network, along with more congestion and delays, and the Modal Alternative as potentially feasible expansions of California's highways and airports to provide added capacity to handle intercity travel comparable to that which would be provided by the proposed HST system. On the basis of the systemwide comparison of alternatives, the Authority and FRA have identified the HST Alternative as the preferred system alternative.</p> <p>The Modal Alternative represents a reasonable build alternative to the proposed HST system. In the Modal Alternative hypothetical infrastructure improvements were defined to provide an equivalent capacity to serve the future intercity demand. The co-lead agencies recognize the current trends in the commercial aviation industry and have placed the hypothetical aviation infrastructure improvements defined in the Modal Alternative at existing airports with strong existing and growing regional/intrastate markets and associated service. Because of its central location, the Fresno airport (FAT) was considered the appropriate place within the Central Valley to apply infrastructure improvements to support increased air travel demand.</p>

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Standard Response 2.3.1	<p>The suggested use of larger aircraft to accommodate the demand for intercity trips is not considered a viable alternative option for the Modal Alternative for several reasons, including (1), in part, because airports other than LAX and SFO would require extensive improvements to accommodate the larger aircraft; (2) the prevailing trend in the for-profit commercial aviation industry is towards a greater reliance on small and regional jet aircraft (up to 135 passengers) to serve the short-haul intercity travel market, which provides advantages such as lower operating costs, increased frequency and higher gate utilization; and (3) given current factors affecting profitability in the California intercity air travel market it does not appear feasible and it would be speculative to assume that the commercial airlines would incur the expense of changing to larger aircraft for intercity regional service. (See Appendix 2-G of the Program EIR/EIS)</p> <p>Existing and planned intracity public transportation networks such as subway, light rail, and bus systems serve local and regional travel demand, which would in turn free some transportation system capacity that could be used by intercity trips. These systems were not included in the Modal Alternative because they already exist to a large extent in the larger markets where they would be considered appropriate (San Francisco Bay Area, Los Angeles, Sacramento, San Diego) and it would require a level of detailed study not appropriate for this analysis to ascertain the specific amount of intercity capacity that could be derived by specific extensions or improvements to these existing rail transit systems. Proposed concepts for high-speed regional transit using Maglev or other technology could have similar effects of diverting local and regional travel demand, but they would not serve intercity passengers.</p>
Standard Response 2.7.1	<p>The “ability to carry passenger’s cars” is not considered to be “an essential component” of the HST system. Transporting cars on the HST system would require different equipment and lower operating speeds. The time that would be required for the loading and unloading of passengers’ cars would greatly increase dwell times at stations and would not be a reliable HST service. Due to differences in the operating speeds and dwell times required at stations, it would not be practicable to operate slower-moving freight services and frequent HST passenger services on the same tracks during the same service hours. The additional area required for handling passengers’ cars would also require significant additional infrastructure and footprint (area) at each station location. To accommodate the primary city center to city center markets, these station locations are typically constrained high-value urban sites. Moreover, that the cost of carrying passenger cars on an HST system would not compare favorably with the relatively low cost of automobile travel in California. Rental cars would be available to serve HST passengers, just as they are available to air passengers.</p>

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Standard Response 2.7.2	While it is very important that the HST services be separated from standard U.S. freight rail operations, it has not been assumed that this would result in the removal of conventional passenger trains “from being interspersed with freight trains.” The state-supported conventional rail services operated by Amtrak could act as feeder services to the statewide HST system and would continue to remain an important part of the State’s transportation system.
Standard Response 2.7.3	The primary purpose of the proposed HST system is to serve intercity passengers. Section 2.6.3 <i>Potential for Freight Services</i> states that “the proposed HST system could be used to carry small packages, parcels, letters, or any other freight that would not exceed typical passenger loads. This service could be provided in either specialized freight cars on passenger trains or on dedicated lightweight freight trains. In either case, the lightweight freight vehicles would be required to have the same performance characteristics as the passenger equipment. This type of freight could be accommodated without adjustment to the passenger operational plan or modification to the passenger stations and therefore was included in the funding scenario described in the Business Plan.” The Authority’s June 2000 Business Plan assumed an operating income from freight of about \$10 million by 2020 and more than \$16 million by 2030 (Financial Plan, PFM, November 2, 1999). Section 2.6.3 of the Program EIR/EIS also recognizes that a high-speed freight service might also be provided on specialized, medium-weight freight trains, but such freight service is not included in the proposed initial HST system and is not analyzed in the Program EIR/EIS.
Standard Response 2.8.1	The safe operation of the HST system would be of the utmost importance. To this end, the HST Alternative is described as a “fully grade separated and fully access-controlled guideway with intrusion monitoring systems.” This means that the HST infrastructure (e.g., mainline tracks and maintenance and storage facilities) would be designed to prevent access by unauthorized vehicles, persons, and animals. The capital cost estimates include allowances for appropriate barriers (fences and walls), state-of-the-art communication, access-control, and monitoring and detection systems. All aspects of the HST system would conform to the latest Federal requirements regarding transportation security as it was developed and implemented. Information has been added to the Final Program EIR/EIS to more fully address this issue of safety and security (see Section 2.6.2a “Safety and Security”).
Standard Response 2.8.2	A “fully grade-separated” HST system would be imperative for the safety and reliability of the HST service. The EIR/EIS describes the HST system as having “fully grade-separated guideway” (2.6.4 Performance Criteria) which means there would be no highways, any transit, other railroads, pedestrians, or animals crossing the HST lines at-grade.

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Standard Response 2.9.1	<p>Steel-wheel-on-steel rail at lower speed (below 200 mph) was considered and rejected as described in Section 2.6.6 of the Program EIR/EIS. Foreign HST experience, the experience of the Northeast Corridor (Boston to New York to Washington, D.C.), HST studies done elsewhere in the U.S., and the Authority's feasibility studies have all shown that to compete with air transportation and generate high ridership and revenue, the intercity HSR travel times between major transportation markets must be below 3 hours. Amtrak's "California Passenger Rail System: 20-Year Improvement Plan" (Amtrak, March 2001) suggests that by 2020 the improved conventional rail service between Oakland and Bakersfield with 110 mph maximum speeds could be reduced to 4 hours and 55 minutes (as compared with 6 hours and 9 minutes in 2000). Using the current 2.5-hour thruway bus connection between Bakersfield and Los Angeles, this would result in an Oakland to Los Angeles line-haul time (with bus connection) of about 7 hours and 25 minutes which would not be competitive with air travel.</p>
Standard Response 2.9.2	<p>A more robust and modern traditional regional and local rail and transit system would not meet the purpose and need of the HST system, which is to serve longer distance intercity passenger travel demand. In order to relieve capacity constraints of the existing transportation system and generate sufficient ridership to be economically viable, an HST system must offer competitive travel times with air transportation and the automobile. Steel-wheel-on-steel rail at lower speed (below 200 mph) was considered and rejected as described in Section 2.6.6 of the Program EIR/EIS. Foreign HST experience, the experience of the Northeast Corridor (Boston to New York to Washington D.C.), HST studies done elsewhere in the U.S., and the Authority's feasibility studies have all shown that to compete with air transportation and generate high ridership and revenue, the intercity HSR travel times between major transportation markets must be below 3 hours.</p> <p>Improvements to light rail for major Central Valley communities would not serve trips between regions, which is the primary purpose of the HST. Providing 140-mph, double-tracked service in the San Joaquin corridor would require similar infrastructure as the HST Alternative. Both train technologies would require the same fully grade-separated infrastructure that could not share tracks with standard U.S. freight operations, and both would require new alignments through mountain passes in both northern and southern California (Program EIR/EIS, Section 2.6.6). Amtrak and Caltrans Division of Rail studies have limited their long-term planning to 110 - 125 mph as the practical potential maximum speeds for the non-electric San Joaquin service that shares track with freight services (see Amtrak's "California Passenger Rail System 20-Year Plan", March 2001 and Caltrans "California State Rail Plan 2003-2004 – 2013-2014"). Even that speed would require a special signal and train control system such as Positive Train Control. Given these facts, the Authority's work</p>

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	has indicated that the cost of providing 140 - 150 mph HST service would be similar to providing HST service over 200 mph, yet the slower speeds won't compete with air travel and won't attract the needed ridership.
Standard Response 2.9.4	<p>The HST system would not be compatible with conventional U.S. freight railroad services. The HST system would not share tracks with conventional U.S. freight rail services anywhere on the system when traveling at high-speeds, and it has been assumed that the HST services are likely to be either physically or temporally separated from conventional U.S. freight rail even on shared use segments at reduced speeds. Operating freight trains at axle loads approaching conventional U.S. axle loads (27 metric tons per axle) and much slower speeds along with HST services would compromise HST operating efficiency, maintenance standards/tolerances and strict safety requirements. Conventional U.S. freight trains also require different track geometry in terms of superelevation and grades (see the Authority's 1999 "Corridor Evaluation" report and Caltran's 1994 "Freight Compatibility Study").</p> <p>Section 2.6.3 of the Draft Program EIR/EIS, Potential for Freight Services does state, "a high-speed freight service might also be provided on specialized, medium-weight freight trains. This specialized freight equipment would have limited axle loads (19 metric tons compared to the conventional freight standard of 27 metric tons per axle), would operate at speeds of up to 125 mph (200 kph), and would be scheduled at night to avoid conflict with passenger or maintenance operations. A medium-weight freight service could carry high-value or time-sensitive goods such as electronic equipment and perishable items. Although such a service would not interfere with passenger operations, it would require loading and unloading facilities separate from the passenger stations. Additional pick-up and distribution networks for this type of freight would also be required. While the Authority recognizes the potential for overnight medium-weight freight service on the proposed high-speed tracks, it has not been included in this analysis. Discussions with potential high-speed freight operators could be initiated as part of subsequent project development with appropriate analysis." Any future potential for freight service on the proposed high-speed tracks is uncertain and speculative at this time; it is neither planned, nor proposed.</p>
Standard Response 2.10.1	Maglev technology was considered and rejected as outlined in Chapter 2 (2.6.6 <i>High-Speed Train Technology Considered and Rejected</i>) of the Program EIR/EIS.

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Standard Response 2.10.3	<p>Maglev technology was considered and rejected as was outlined in the Draft EIR/EIS. Section 2.6.6 <i>High-Speed Train Technology Options Considered and Rejected</i> explains that Maglev was eliminated since it “would not allow for direct HST service to major intercity travel markets and therefore would not meet the purpose and need and objectives for the proposed project.” In certain heavily constrained urban corridors (i.e., San Francisco Peninsula from San Jose to San Francisco, and the LOSSAN rail corridor between Los Angeles and Orange County), the HST service will need to share tracks with existing services. Maglev technology requires separate and distinct guideway configurations that would preclude the sharing of rail infrastructure and be limited in its ability to share existing rail right-of-way.</p> <p>The Southern California Association of Governments (SCAG) is pursuing Maglev technology for a high-speed regional transit network, which focuses on commuter travel. This potential service could complement and connect with a statewide HST system providing intercity travel.</p> <p>There are no intercity Maglev systems in revenue service anywhere in the world, and none are under construction anywhere in the world. A short (approximately 20-mile-long) airport-to-downtown Maglev line has recently begun revenue service in Shanghai. This service does not demonstrate or simulate complex intercity operations. Moreover, China has not selected Maglev technology for an intercity high-speed line. According to press reports, the Chinese have concluded that as compared to steel-wheel-on-steel-rail HST, Maglev would be two to three times more expensive to build, and has not been proven operationally (<i>Hong Kong Standard</i>, November 15, 2003; <i>The Straits Times</i>, October 4, 2003; <i>China Daily</i>, January 15, 2004).</p> <p>Authority studies have shown that Maglev technology would have higher potential maximum speeds and could accelerate and decelerate more quickly, than steel-wheel-on-steel-rail technology but would require more energy to operate and be more expensive to build.</p>
Standard Response 2.12.2	<p>Steel-wheel-on-steel-rail trains have been used for over 100 years, and the technology is continually being improved. Automobile and aircraft have also been used for over 100 years. HST trains are a “modern technology” which can allow for efficient and safe passenger operations at speeds over 200 miles per hour. State-of-the art signaling systems can enable HST to operate at these high speeds with a minimum headway (time between trains) of as little as 3 minutes. Since its introduction in Japan in 1964, HST technology has been continually improving. For example, while the initial Japanese Shinkansen (bullet train) Series 100 operated at 130 mph 40 years ago, the new Series 500 and 700 Shinkansen trains operate with maximum speed of about 187 mph, but with greater efficiency, less noise, and more comfort than the Series 100, and have been tested at speeds of nearly 300 mph. East Japan Railways is testing prototype trains capable of in-</p>

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	service speeds of 224 mph. The European experience has been similar. The analysis of the Draft Program EIR/EIS assumes the use of the next generation of HST technology, which will be capable of sustained operational speeds of 220 mph. There are absolutely no facts to support the claim that steel-wheel-on-steel-rail technology will be outdated by the time an HST system could be built in California. On the contrary, a new steel-wheel-on-steel-rail HST system is being constructed in Taiwan, a new system just began operations in Korea, and European and Japanese networks are continuing to expand (for example Spain and Italy are investing about \$30 billion each to expand their HST and conventional rail networks, and the TGV network is being extended to the Netherlands). By 2020, most of Europe will be interconnected by a compatible, electrified, standard-gauge, steel-wheel-on-steel-rail HST network.
Standard Response 2.13.1	The purpose of the HST system is to serve intercity trips (trips between regions) with HST service linking the state's major metropolitan areas. While feasibility studies have shown that the link between San Francisco and Los Angeles via the Central Valley produces the highest ridership and revenue for a statewide HST system, they have also led to the conclusion that additional links to other major metropolitan areas are critical for the success of the system. Focusing solely on the Los Angeles to San Francisco segment was considered but rejected (see Section 2.6.8, Program EIR/EIS). The phasing of the construction of the HST project has not been determined. Should the HST project move forward, phasing for the project would be considered in later stages of project development.
Standard Response 2.15.1	<p>The proposed HST would link the state's major metropolitan areas – which is where the highest concentrations of people (and potential ridership) are now and which are expected to grow. There would be a variety of HST services, including express trains where the HST trains may not stop between the terminus stations. The concept of having a HST system with only a couple of stops would not meet the purpose and need identified for the proposed HST system since this would not link the major metropolitan areas of the state.</p> <p>The amount of infrastructure needed for the HST system and potential operational costs are summarized in Chapter 4, Costs and Operations, of the Draft Program EIR/EIS. Ridership forecasts were done as part of the Authority's June 2000 Business Plan; these forecasts are referenced in Chapter 2, Alternatives, of the Draft Program EIR/EIS. Please also see standard response 2.13.1.</p>
Standard Response 2.16.1	San Francisco to Sacramento travel market has been included in the Alternatives under consideration. The Authority's ridership forecast estimate between 1.7 and 3.2 million passengers annually would take the HST system between Sacramento and the Bay Area by 2020. In addition, the Authority supports improvement of

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	<p>the Capitol Corridor conventional rail service.</p> <p>The Capitol Corridor rail service is expected to continue to improve and expand operations. However, the Capitol Corridor Joint Powers Authority envisions continuing non-electric, conventional rail-type service. The Capitol Corridor would (at least initially) act as a feeder service to a statewide HST system (up to 110 mph). Much of this existing rail corridor parallels the I-80 highway corridor. The Capitol Corridor was considered but rejected as an HST alignment option to link Sacramento and the San Francisco Bay Area. Because the Capitol Corridor has severe speed restrictions from Benicia in Contra Costa County through Santa Clara County, a HST trip from Sacramento to Los Angeles via a Capitol Corridor alignment which goes through the San Francisco Bay Area would take approximately 1.5 hours longer than a Sacramento to Los Angeles HST trip via the SR-99 Corridor, and therefore would not meet the project objectives. While the Capitol Corridor is not included as part of the proposed HST system, it could be considered in the future as a potential extension of the proposed HST system. (Program EIR/EIS, Section 2.6.8.D)</p>
Standard Response 2.16.3	<p>The Capitol Rail Corridor was eliminated from further investigation in this Draft EIR/EIS as part of the proposed statewide HST system because it could not provide as competitive travel times as the main proposed HST alignment between Sacramento and southern California. The Sacramento to southern California link was determined to be a critical part of an initial statewide HST system by the Commission's feasibility studies (see Program EIR/EIS, Section 2.6.8.D). The Program EIR/EIS states that the Capitol Corridor could be considered in the future as a potential extension of the proposed HST system because the Capitol Corridor could offer direct HST service to markets (e.g., Solano and Yolo Counties) that are not served by HST stations considered in this program EIR/EIS. The Authority acknowledges that if constructed, the HST system could ultimately be extended to other locations—if it were financially and environmentally feasible to do so. However, the investigation of other potential HST extensions beyond the proposed HST system is beyond the scope of this program environmental process (please also see standard response 2.16.1).</p>
Standard Response 2.18.1	<p>The Authority and the FRA have determined that additional study will be needed in a separate program EIR/EIS in order to identify a preferred alignment alternative for the northern mountain crossing and that Altamont alignment options will be considered in that separate program EIR/EIS. A broad corridor is recommended containing a number of feasible route options. This broad corridor is generally bounded by (and includes) the Pacheco Pass (SR-152) Corridor to the south, the Altamont Pass (I-580) Corridor to the north, the BNSF Corridor to the east, and the Caltrain Corridor to the west. The Authority would not pursue alignment options through Henry Coe State Park, and station options at Los Banos.</p> <p>The San Jose to Merced segment involves the crossing of the Diablo Range Mountains that separate the</p>

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	<p>Central Valley from the San Francisco Bay Area. This is one of the most difficult geographic features encountered by the proposed HST system and is an area of controversy. The Authority has determined that a next-tier Program EIR/EIS process be initiated to focus on the selection of a preferred alignment between the Central Valley and the San Francisco Bay Area.</p> <p>Many comments have been received urging further evaluation of the Altamont Pass as a potential alignment option. Federal agency comments and others have noted the limitations of available resources information regarding the Diablo Range mountain crossing. In addition, comments have been received indicating that other undeveloped areas in the northern mountain crossing outside the current boundaries of Henry Coe State Park contain sensitive resources. A next-tier Bay Area to Merced Program EIR/EIS should consider alignment options between (and including) the Pacheco Pass Corridor (SR-152) to the south, and the Altamont Pass Corridor (I-580) to the north. Section 2.6.8F of the Draft Program EIR/EIS is <u>not</u> included as part of the Final Program EIR/EIS.</p> <p>Many comments have also been received opposing potential HST alignments through (or under) Henry Coe State Park (which includes the Orestimba State Wilderness Preserve). The Authority has determined that alignment options through Henry Coe State Park should <u>not</u> be pursued in any subsequent environmental analysis.</p> <p>HST alignments through Henry Coe State Park would have greater potential environmental impacts than alignment options through the Diablo Range that would avoid the park to the north. Alignments through Henry Coe State Park would have the highest impacts to Section 4(f) and 6(f) Resources (both long-term and construction impacts). In addition, the considerable amount of public and agency input in regards to these alignment options has been overwhelmingly opposed to any construction through Henry Coe State Park.</p> <p>The Authority has also determined that the Pacheco Pass alignment HST station at Los Banos (Western Merced County) should <u>not</u> be pursued in subsequent environmental reviews because of low intercity ridership projections for this site, limited connectivity and accessibility, and potential impacts to water resources and threatened and endangered species. Although the City of Los Banos supports the Pacheco Pass alignment with a potential station at Los Banos, considerable public and agency opposition has been expressed about a potential Los Banos HST station because of its perceived potential to result in growth related impacts. This station option (as well as the Visalia/Hanford option) has low ridership potential compared to other potential station locations investigated by the Authority. In 2020, this station is forecast to serve a population of only about 88,000 (forecast to only have between 155,000 and 190,000 annual total intercity boardings and alightings by 2020). This is expected to slightly reduce the capital costs of the HST system and reduce</p>

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	<p>potential environmental impacts at Los Banos.</p> <p>The next-tier Program process would include addressing such issues as HST design options, costs, operational issues (such as frequency of service and the potential for splitting trainsets), design and cost for a Dumbarton HST bridge crossing, potential environmental impacts, and will consider additional ridership data to the extent that it is available.</p> <p>Section 3.18 of the Final Program EIR/EIS addresses construction methods and the potential for construction impacts in general. In addition, each section of Chapter 3 also outlines specific design features that will be applied to the implementation of the HST system to avoid, minimize, and mitigate potential impacts. However, construction impacts are highly site-specific in nature. These issues will be addressed in detail during subsequent project level environmental review, based on more precise information regarding location and design of the facilities proposed (e.g., specific alignment, right of way corridor width, elevated, at-grade, cuts and fills, etc.). The detail of engineering associated with the project level environmental analysis will allow the Authority to further investigate ways to avoid, minimize and mitigate potential impacts.</p>
Standard Response 2.21.1	<p>The alignment option of having a dedicated HST system utilize the LOSSAN rail corridor was considered and rejected. As was stated in Section 2.6.8 (H), "After reviewing the work of the Commission, recent technical reports, and comment received during scoping and in the screening process, the Authority and the FRA studied an upgraded LOSSAN corridor to provide higher operating speeds but rejected a dedicated high-speed system for this area. The high level of existing passenger rail [service], extensive existing rail infrastructure, and mixed [freight and passenger] rail traffic operations on this corridor, along with the limited existing right-of-way and sensitive coastal resources, make a dedicated electrified HST service infeasible for this corridor at this time." (Draft Program EIR/EIS, page 2-40)</p> <p>The concept of electrified, shared-use HST operations along the LOSSAN corridor south of Irvine was considered and rejected. As was stated in Section 2.6.9 (E), "The potential impacts of overhead catenary structures associated with a proposed electrified HST system were of concern to the coastal communities. The prior bullet train proposal and feasibility studies of the Intercity HST Commission and the Authority, as well as the scoping and screening portions of this Program EIR/EIS process, indicated substantial opposition to the overhead catenary needed for the electrified HST technology. In the San Diego region, SANDAG, transportation agencies, and cities indicated a preference for the LOSSAN corridor to be an incrementally improved non-electrified service (that would require a transfer to the statewide HST network), and for the I-15 corridor to be evaluated as an option to provide direct HST service on new infrastructure to San Diego via the Inland Empire." (Draft Program EIR/EIS, page 2-93)</p>

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	<p>The construction of a fully dedicated steel-wheel-on-steel-rail HST system was considered and rejected. As stated in Section 2.6.6, “while a completely dedicated train technology using separate track/guideway would be required on the majority of the proposed system, requiring such separation everywhere in the system would prohibit direct HST service to certain heavily constrained terminus sections (i.e., San Francisco Peninsula from San Jose to San Francisco, and the existing LOSSAN rail corridor between LAUS and Orange County). Because of extensive urban development and severely constrained right-of-way, HST service in these terminus sections would need to share physical infrastructure (tracks) with existing passenger rail services on these heavily constrained corridors. Sharing track with existing passenger rail services on these heavily constrained corridors would allow for direct HST service without passenger transfer. However, the HST system would need to be compatible with other trains sharing the tracks.” (Draft Program EIR/EIS, page 2-28) While there are operational drawbacks associated with shared-use operations (reduced capacity for HST operations, equipment and compatibility issues, greater potential for delays, and some increase in travel times), there are also benefits including fewer environmental impacts, safety and service improvements for the other rail services sharing the infrastructure, improved automobile traffic flow as a result of grade separation, reduced noise impacts, and reduced capital costs. Like all other portions of the proposed HST system, the shared-use segments of the HST system would be required to meet the FRA’s safety standards.</p>
Standard Response 2.25.1	<p>An alignment “west of SR-99” was considered and rejected from further consideration. The reasons for rejecting the west of SR-99 option are described in Section 2.6.9 <i>Alternative Alignment and Station Options Considered in Screening Evaluation</i> of the Program EIR/EIS. This evaluation is supported by the <i>Screening Report</i> (April 2002), and the <i>Sacramento to Bakersfield High-Speed Train Alignments/Stations Screening Evaluation Report</i> (September 2001).</p> <p>Creating a new transportation corridor for a proposed HST alignment west of SR-99 would require cutting through agricultural lands roughly 2 to 5 miles (3 to 8 km) from SR-99. This alignment would result in more potential impacts on agricultural lands and natural resources and would have high severance impacts through the Central Valley. In most instances, these alignments would not serve existing downtown areas and existing population centers, and would therefore result in the placement of stations in outlying suburban locations at a distance from population centers. Such stations would generate lower ridership and revenue and would have poorer connectivity and accessibility than potential stations in cities and on existing rail alignments. Outlying station locations would increase development pressure on agricultural lands.</p> <p>The scoping and screening comments received from federal, state, regional, and local agencies as well as the public generally supported the concept of locating a proposed HST system along an existing rail corridor to</p>

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	<p>the greatest extent possible. Using existing rail corridors would reduce potential impacts on natural resources, agricultural lands, and adjacent properties. Maximizing the use of existing transportation corridors and rights-of-way, to the extent feasible was included in the statement of purpose and need for the proposed HST system and was concurred with by the EPA, USACE, FAA, USFWS, FHWA, and FTA.</p> <p>The Authority's predecessor, the HST Commission, did not find the BNSF or the UPRR alignments to be "infeasible." The Commission did find that a "new alignment serving outlying suburban stations is a substantially less expensive option for the SR-99 Corridor" (Intercity HSR Commission, Final Report, December 1996, page 8-10). Table 8.3 <i>Comparison of Central Valley Alignments</i> shows the "new" alignment (west of SR-99) at \$2.98 billion, the Southern Pacific (now UPRR) at \$6.23 billion, and the BNSF at \$4.0.4 billion. As stated, these cost differences were based on the assumption that the west of SR-99 alignment would be serving outlying stations, not downtown locations. If a new west of SR-99 alignment concept were studied further with "loop" lines to provide local/skip-stop HST service to Central Valley downtowns, it would have greatly increased potential impacts on agricultural lands, natural resources, and severance impacts, as well as increased construction costs.</p> <p>The Authority has identified the BNSF alignment as the preferred alignment between Bakersfield and Stockton¹ in part due to concerns about potential noise impacts. As compared to the UPRR alignment, the BNSF alignment avoids more urban areas, is estimated to be less costly (more than \$1 billion less) than the UPRR alignment, and would minimize potential noise impacts. The BNSF alignment would require substantially less aerial construction than the UPRR alignment. While there would be an increase of noise levels due to increased frequencies of trains, where the HST tracks can be constructed at grade there could be a reduction in noise levels due to the elimination of existing horn noise and gate noise as a result of the grade separations at existing crossings. Please also see standard response 6.15.4.</p> <p>Section 3.4 <i>Noise and Vibration</i> of the Program EIR/EIS identifies potential noise and vibration impacts on sensitive receptors or receivers such as residences areas, schools, and hospitals. This section also discusses the potential benefits of adding grade separations for existing railroads. Since this is a program-level environmental document, the analysis of potential noise and vibration impacts broadly compares the relative differences in potential impacts between the alternatives and HST alignment options. General mitigation strategies are also discussed. The analysis shows that the application of noise barriers would result in a considerable reduction of potential HST noise impacts. With mitigation, HST segments with a high potential</p>

¹ However, use of the BNSF alignment through Fresno was considered but rejected from further consideration. The "BNSF" option defined for this Program EIR/EIS utilizes the UP alignment through Fresno.

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	rating would be adjusted down to at most a medium rating. More detailed mitigation strategies for potential noise and vibration impacts and specific mitigation would be developed in the next tier (project-specific documents) of environmental analysis.
Standard Response 2.28.2	<p>Five different potential station locations were investigated for the Santa Clarita Valley (SR-126/I-5, Magic Mountain Parkway/I-5, Via Princessa/SR-14, Old Road/I-5, and San Fernando Road/SR-14) and all five were rejected as part of the screening evaluation because they were impracticable, and/or did not meet the project objectives. The rationale behind eliminating the Santa Clarita Valley station options is presented in Section 2.6.9 <i>Alternative Alignment and Station Options Considered in Screening Evaluation</i> (Program EIR/EIS).</p> <p>The Authority has identified the Sylmar Metrolink site as the preferred HST station site to serve the San Fernando Valley, Simi Valley, and Newhall/Santa Clarita areas. The Sylmar Metrolink site would provide a direct connection to the Metrolink regional commuter rail service and would have convenient access to the Los Angeles freeway network.</p>
Standard Response 2.29.1	<p>The old north/south freight route between Los Angeles and Orange County (the Pacific Electric Right-of-Way) was considered and rejected. Section 2.6.9 (E) states, "this alignment would not meet the project objectives because it would not provide sufficient accessibility and connectivity, because it would be convenient to only a single freeway and it would not directly serve Anaheim and/or Irvine, the two major transit hubs in Orange County. Further, much of the alignment, including the Garden Grove station site, would be located in a residential neighborhood, which is currently being studied as a potential local transit corridor by both the Orange County Transportation Authority and the Gateway Cities of Southeast Los Angeles County. Therefore, it would potentially conflict with future planned development. This option would also be impracticable because of high construction impacts and high costs, with long sections abutting residential areas and potential mitigation requirements, such as trenched construction." (Draft Program EIR/EIS, pages 2-86). The Irvine Transportation Center is the preferred HST station location for a South Orange County HST station. This site is a major transit hub in Southern Orange County and is the HST site supported by the City of Irvine and OCTA.</p>
Standard Response 2.29.2	<p>The alignment option that extends from L.A. Union Station along the BNSF Fullerton Line to Fullerton and then on to Riverside was considered and rejected from further consideration. Section 2.6.9 <i>Alternative Alignment and Station Options Considered in Screening Evaluation</i> indicates that this alignment option (see page 2-77 of the Draft Program EIR/EIS) was eliminated because it did not meet the project objectives. The BNSF rail option would have limited right-of-way and traverse the Santa Ana Canyon, resulting in high</p>

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	potential impacts on water resources, wetlands, parklands, visual, and cultural resources. Because this option would result in longer travel times between Los Angeles and San Diego (estimated at up to 24 min; see <i>Screening Report</i> , April 2002), it also has low ridership potential. The Anaheim Transportation Center and Irvine Transportation Center sites were selected as the preferred HST stations sites to serve Central and Southern Orange County (respectively) the co-lead agencies consider that these locations to offer the greatest connectivity and accessibility as well as ridership potential for the region. The preferred alignment between LAUS and Riverside is the existing UP Riverside/Colton freight corridor. New improvements would be required regardless of which alignment was selected between Los Angeles and Riverside.
Standard Response 2.30.1	The alignment option of using the I-5 freeway between Oceanside and San Diego was considered and rejected. Section 2.6.9(E) states that “this option would not meet basic project objectives because of poor connectivity and accessibility to regional transit, and would not avoid or substantially reduce environmental impacts. It was also considered to be impracticable because of high right-of-way constraints.” (Draft Program EIR/EIS, pages 2-89) While the I-5 option would avoid sensitive coastal area, in many places, particularly at lagoon crossings, it would, however, share many of the environmental issues and sensitivities of the coastal areas of the LOSSAN corridor. In addition, because of the constrained right-of-way along the I-5 corridor, there would be potential property impacts on adjacent land uses. The need for aerial construction would also result in considerable potential for visual intrusion, including interference with ocean and lagoon views. Please also see standard response 6.42.1.
Standard Response 2.31.4	Several factors were considered in identifying potential station stops, including speed, cost, local access times, potential connections with other modes of transportation, ridership potential, and the distribution of population and major destinations along the route. There is a critical tradeoff between the accessibility of the system to potential passengers, which is provided by multiple stations and stops, and the resulting HST travel times. Additional or more closely spaced stations (even with limited service) would lengthen travel time, reduce frequency of service, and constrain the ability to operate both express and local services. The ultimate location and the configuration of stations cannot be determined at this time; this would occur during subsequent project-level environmental processes. Selection of station options will be made to allow the Authority to pursue proposed station development at or near those locations in future project specific studies. It is possible that some of the preferred station options included in the Final Program EIR/EIS will not be built. The HST system that has been evaluated in the program EIR/EIS and preferred HST alignment and station locations well serve California’s major intercity travel markets – including intermediate stations. Much of the ridership forecast for the HST system is expected to come from intermediate markets. By having a variety of

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	services (Express, Semi-express, Suburban-express, and Local) the HST system can effectively and efficiently serve California's long-distance and intermediate travel markets between regions.
Standard Response 2.33.1	The safe operation of the HST system would be of the utmost importance. Some of the HST alignment options are adjacent to or within existing transportation corridors including existing freight railroad lines. In these situations, either adequate separation distances between the HST and freight tracks must be provided, or barrier walls or berms would be constructed to prevent intrusion of other freight rail services into the HST track infrastructure. Subsequent project level environmental review and engineering analysis will include coordination with existing freight owner/operators, passenger rail owner/operators, California Public Utilities Commission, and the FRA to determine a safe solution to the challenges inherent in adjacent operation of HST and Freight rail traffic.
Standard Response 2.35.1	Should the HST project move forward, the selection of maintenance facility locations would be part of future studies and environmental documentation.
Standard Response 2.36.1	The purpose and need of the proposed HST system is to link California's major metropolitan areas. If constructed, the HST system could ultimately be extended to other locations—if it were financially and environmentally feasible to do so. However, the investigation of other potential HST extensions beyond the proposed HST system is beyond the scope of this program environmental process.
Standard Response 2.36.3	<p>The Authority has identified Merced (Castle Airport Aviation and Development Center) as a potential HST station site (please also see standard response 6.19.1). However, while this site would provide the opportunity for connectivity with local and regional transit services, and perhaps with a "future slower-speed" rail link between Merced and Yosemite National Park, the implementation of such a rail link is not under the jurisdiction of the Authority, and the investigation of such future local feeder services is beyond the scope of this program-level environmental document.</p> <p>The purpose and need of the proposed HST system is to link California's major metropolitan areas. If constructed, the HST system could ultimately be extended to other locations—if it were financially and environmentally feasible to do so. However, the investigation of other potential HST extensions beyond the proposed HST system (such as the Bakersfield-Lancaster-Cajon-San Bernardino alignment to bypass most of the Los Angeles Metropolitan Area) is beyond the scope of this program environmental process. The ridership forecasts for the HST system concluded that the Los Angeles HST station (Union Station) would be the most heavily used station on the HST system.</p>

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Standard Response 2.36.4	The purpose and need of the proposed HST system is to link California's major metropolitan areas. If constructed, the HST system could ultimately be extended to other locations—if it were financially and environmentally feasible to do so. However, the investigation of other potential HST extensions beyond the proposed HST system is beyond the scope of this program environmental process. An alignment through the Sierra foothills from Redding to Chico to Yuba City to Roseville to Lone to Merced Falls to Clovis to Porterville to Woody to Tehachapi to Rosamond to Phelan to Rialto to Murrieta and on to San Diego does not serve California's major metropolitan areas. Such an alignment would not be able to attract the ridership and revenue necessary to support a viable HST service. Please also see standard response 2.25.1 regarding the consideration and rejection of routes east and west of SR-99, and standard response 2.12.2 regarding high density development around stations.
Standard Response 2.36.7	<p>The Authority has considered the request that the Fullerton Transportation Center be a station for some HST service, but determined that the Draft EIR/EIS appropriately analyzed potential HST stations in Anaheim and Irvine and they are the preferred HST stations for serving Orange County, based upon current knowledge and consistent with the objectives of the proposed HST system to serve the state's major population centers. There is a critical tradeoff between accessibility of the system to potential passengers and the resulting HST travel times. Additional or more closely spaced stations (even with limited service) would negatively impact travel times, frequency of service, and the ability to operate both express and local services.</p> <p>Several key factors were considered in identifying potential station stops, including speed, cost, local access times, potential connections with other modes of transportation, ridership potential, and the distribution of population and major destinations along the route. The co-lead agencies investigated the appropriate HST station sites for this program-level process. However, the ultimate locations and the configurations of stations cannot be determined until the more detailed project-level environmental processes.</p>
Standard Response 2.36.8	The Program EIR/EIS identifies an HST alternative that could be constructed by 2020, and serves California's major metropolitan areas. If constructed, the HST alternative could ultimately be expanded to provide alternate routes and to serve additional markets—if it were financially and environmentally feasible to do so.
Standard Response 2.37.2	The preferred technology identified in the Draft EIR/EIS for the proposed HST system is electrically-powered steel-wheel-on-steel-rail train technology. Maglev technology was considered and rejected from further investigation. Please see standard response 2.12.2 in regards to electrically powered steel-wheel-on-steel-rail HST technology, and standard response 2.10.3 in regards to the Authority's decision that the HST technology must be capable of sharing tracks with other existing services.

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	No HST system operates at high-speeds anywhere in the world in revenue service or on a full-scale test track where train cars will glide over rails topped with a plastic material. The Authority has proposed the implementation of a statewide HST system using technology which has been proven in commercial service, rather than proposing further research and development for new technology which has not yet been developed for commercial service.
Standard Response 3.1.1	<p>It is a program purpose to integrate HST with local public transit systems (see Section 1.1, Program EIR/EIS). The Program EIR/EIS identifies many potential station locations that are, or will be, multi-modal transportation complexes. Connectivity and accessibility were key factors in identifying station location options. The selection of the ultimate station locations will occur in the future after further environmental study, when connections with local and regional transit services will receive additional consideration. However, the planning and implementation/improvement of local public transit systems is not under the jurisdiction of the Authority, and the investigation of such future local services is beyond the scope of and is not included in this program environmental document.</p> <p>The Authority has identified preferred HST stations that are multi-modal transportation complexes predominately located in city centers (San Francisco, San Jose, Sacramento, Fresno, Bakersfield, Los Angeles, Anaheim, San Diego, etc.). The only station locations that have been identified as preferred HST stations which are outside of city centers are existing transportation hubs (e.g., Modesto Amtrak Briggsmore Station, Merced Castle Air Force Base, SFO-Millbrae).</p> <p>For the comparison of alternatives in the Bay Area to Merced region, the Draft Program EIR/EIS states, “the only significant projected degradation under the HST Alternative compared to the No Project Alternative would occur at the proposed Transbay Terminal, where the LOS would degrade from LOS D to LOS F, and the V/C ratio would increase from 0.89 to 1.01 because substantially more trips would be attracted to the facility.” (pages 3.1-15) This section also concludes that the HST alternative would improve overall traffic conditions as compared to the No Project Alternative (the analysis concluded that the V/C ratios along the Bay Area-Merced highway segments investigated would improve by approximately 5% on average). The Draft EIR/EIS notes “the HST Alternative is not expected to have any substantial impact on public transit conditions compared to the No Project Alternative” (page 3.1-17), which means that the HST Alternative would not create significant additional negative impacts on public transportation as compared to the No Project Alternative. Encouraging public transit use is not considered to be a negative environmental impact.</p> <p>The summary chapter of the Draft Program EIR/EIS includes Table S.6-1 Summary of Key Environmental</p>

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	Impacts and Benefits for System Alternatives. For mitigation strategies for traffic and circulation for HST this table states, "Encourage use of transit to stations. Work with transit providers to improve station connections." (Draft Program EIR/EIS). A more detailed description of potential mitigation measures for traffic and circulation is found in Section 3.1.5 (within Section 3.1 Traffic and Circulation).
Standard Response 3.1.2	The Program EIR/EIS Section 5.4 Potential Indirect Impacts of Induced Growth summarizes the potential indirect impacts related to incremental population and employment growth, and associated changes with urbanization. Subsection 5.4.1 Transportation discusses the potential impacts of induced growth on traffic conditions for highways, roadways, passenger transportation services (i.e., bus, rail, air, intermodal), goods movement, parking, and transit facilities within the study area. This work is part of the Economic Growth and Related Impacts analysis done for this program environment process and summarized with Chapter 5 of the Program EIR/EIS. The Draft Program EIR/EIS discusses the potential increase in traffic around stations, and the degree to which that increase may be significant. In addition to discussing the potential traffic around stations, the document also discusses potential impacts on highways; and to transit, goods movement, and parking. The effects of potential increases or decreases are discussed in Section 3.1.3 Environmental Consequences for the overall comparison for the three Alternatives (No Project, Modal, and HST), and Section 3.1.4 Comparison of Alternatives by Region for the five regions investigated as part of the program process. More detailed analysis of potential traffic-related impacts and the effects of those impacts will be presented in future project-specific environmental documents should the HST project move forward.
Standard Response 3.4.1	<p>It is not possible to estimate construction noise levels at the program-level. The specific construction methods and anticipated noise levels related to construction would be evaluated in subsequent project-level environmental review.</p> <p>The Program EIR/EIS generally identifies potential noise impacts on sensitive human receptors at a program planning level based on the type of land use present and the anticipated noise levels along a particular segment. This screening analysis was based on existing and planned land use types and anticipated background and HST noise levels. In subsequent project-specific environmental review, potential noise impacts would be estimated for noise sensitive areas, taking into consideration the features of specific alignments, ambient noise levels, land uses on adjacent properties and nearby wildlife habitat areas. In addition, a detailed analysis would consider application of noise mitigation measures at locations where significant impacts are identified.</p> <p>The Program EIR/EIS noise analysis accounts for the proposed track elevation (aerial or at-grade) in identifying potential levels of impacts (low, medium, high) (see page 3.4-3 <i>Application of Screening Method to</i></p>

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	<p><i>Conventional Rail and High-Speed Train Modes).</i></p> <p>Noise barrier walls could be placed on either side or both sides of an HST alignment segment depending on the location and proximity of noise-sensitive areas.</p> <p>High-speed intercity trains provide a quiet and comfortable interior environment for the passenger. In operating HST systems, noise levels inside the passenger coaches at 150 mph have been measured at 68 dBA to 73 dBA (Ref: Amtrak Acela). For comparison, noise inside a private automobile is typically about 70 dBA at 60 mph, and in a commercial jet aircraft is about 80 dBA in coach class at cruising altitude.</p> <p>The potential for direct effects of train noise on wildlife in natural areas is not well documented. Current research suggests that the noise effects of trains traveling at very high-speed could have limited influence on some species close to the tracks. Some research has been performed regarding the reactions of animals to low-flying aircraft, but the specific levels of significance and specific effects related to high-speed trains are not known. Long-term changes in behavior tend to be strongly influenced by factors other than intermittent noise exposure (as would occur with high-speed trains), such as weather, predation, disease and other disturbances to animal populations. Conclusions from research conducted to date provide only preliminary indications of the appropriate noise descriptor, rough estimates of threshold levels for observed animal disturbance, and habituation characteristics of only a few species. Long-term effects continue to be a matter of speculation. Since high-speed trains always will be on the same track and on a schedule, habituation may be likely to occur. Sound levels from train passes are also not as high, nor are onset rates as great as they are from low altitude military aircraft, hence, the observed effects of aircraft may not apply to high-speed trains.</p> <p>Potential for noise effects on wildlife and any corresponding loss of habitat would be assessed in project level analysis. In the screening procedure applied in the Program EIR/EIS, the hourly equivalent sound level (Leq) from HST was applied to parks, Land Use Category 1, as this most stringent of the land use criteria and would encompass potential effects on wildlife. Some of these screening distances extend up to 900 feet in quiet natural areas, encompassing the FRA's wildlife screening threshold of SEL= 100 dBA. GIS technology was used to determine the number of acres affected.</p> <p>Mitigation measures for natural areas would be considered at the project level, including relevant information, if any, from countries with high-speed trains. While other HST systems in Europe and Japan have implemented noise mitigation for human receptors, mitigation is not known to have been provided for wildlife, to date. Extensive use of sound walls in rural areas would be impractical. Alternatives to noise barriers in these locations such as trenches or earth berms could be explored during project level environmental review;</p>

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	however, they may also be impractical due to cost and other impacts related to the extent of land required as well as the associated construction impacts. The TGV in France has several locations where topography facilitated the use of fairly deep trenches and earth berms that mitigate noise impacts to sensitive human receptors.
Standard Response 3.4.2	Noise barriers may be proposed in portions of the HST system where subsequent project level studies determine that the HST improvements and/or operation result in impacts. The placement and configuration of the noise barriers would depend on the location and height of the noise-sensitive building(s) or resource(s) and the speed of the high-speed trains. (See Section 3.4.5-A of the Program EIR/EIS)
Standard Response 3.5.3	<p>Please see Section 3.5 <i>Energy</i> of the Program EIR/EIS. This section provides an overview of the potential operation and construction impacts associated with the use of energy, including electrical energy, for the existing conditions and the No Project, Modal and HST Alternatives. The energy analysis concluded that the HST Alternative would have a net energy benefit as compared to the No Project Alternative, but would result in an increase in electric power demand. The Program EIR/EIS assessed the total energy that would be needed from California's electricity grid to power and to operate the proposed HST system from its commencement (a portion of the system) to full implementation. The proposed HST system does not include the construction of a separate power source. The analysis concluded that sufficient electricity is expected to be available to power the proposed HST, as segments are constructed and begin operating, since power generation is expected to grow to meet increased demand in the state and the power needs of the proposed HST system represent a small part of that overall increase in demand. It is beyond the scope of this program EIR/EIS to analyze all the potential additions that may be made to the state's general power system to serve increased electricity demand in California over time.</p> <p>For the purposes of identifying potential impacts and costs in the Program EIR/EIS, the HST power supply system was defined in the Engineering Criteria report, which was included in the Program EIR/EIS by reference. The power supply would consist of a 2x25KV overhead catenary system for all electrified portions of the statewide system. Supply stations would be required at approximately 30 mile intervals. Based on the estimated power needs of this system, these stations would need to be approximately 20,000 square feet (200' X 100'). Switching stations would be required at approximately 15 mile intervals. These stations would need to be approximately 7,500 square feet (150' X 50'). Paralleling (booster) stations would be required at approximately 7½ mile intervals. These stations would need to be approximately 5,000 square feet (100' X 50'). Each station includes a control house that would need approximately 800 square feet (40' X 20'). These facilities are not sited as part of this Program EIR/EIS. However, the facilities defined fall well within the</p>

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	<p>potential impact areas defined for the environmental analysis methods for the program level study. Facility placement, sizing, and spacing would be determined during subsequent project level engineering analysis. This information regarding the power supply system has been incorporated into the Final Program EIR/EIS (Section 2.6.2b "Electrification").</p> <p>Appendix 4-C describes the unit costs and assumptions for electrification items (substations, cable trenches, electrical equipment, catenary poles, wires, power feeders and returns, transformers, etc.). Costs for the transmission lines from the local utility source to the substation are included in the energy costs, which are a part of the HST system operation and maintenance costs.</p>
Standard Response 3.12.1	<p>Revisions have been made in the Final Program EIR/EIS Sections 3.12.5 (mitigation measures) and 3.12.6 (subsequent analysis) indicating that subsequent project-level studies will involve continued consultations with tribes and noting the need for a future agreement document between the Co-lead agencies and SHPO. The Authority is committed to avoiding impacts to Native American resources to the extent feasible and practical through careful alignment design and selection.</p> <p>As noted in the Draft Program EIR/Tier I EIS, Section 3.12, page 26: "Additional site-specific work would be required during project-level environmental review should a decision be made to proceed with the proposed HST system. At the conclusion of the programmatic environmental review process, the Authority and the FRA, in consultation with the SHPO, may develop a programmatic memorandum of agreement (MOA) to describe expectations for the next phase of fieldwork, eligibility determination, and documentation under Section 106 of NHPA and pursuant to CEQA. The programmatic MOA may specify procedures for the identification and evaluation of impacts for future projects."</p> <p>Section 3.12, pg. 27 goes on to say "Mitigation measures needed to address effects and impacts to specific resources could then be developed and incorporated in an MOA between the SHPO, the Advisory Council on Historic Preservation, the FRA, and the Authority during the preparation of project-specific environmental evaluation. The mitigation measures in the MOA would then be incorporated into project-specific environmental documentation and project approvals."</p> <p>The co-lead agencies will comply with federal and state laws and regulations regarding cultural artifacts, e.g. CEQA and Section 106. Notifications and actions will be consistent with federal and state laws, and resolution would be done in conjunction with consultation with appropriate tribes/representatives.</p>

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Standard Response 3.12.2	<p>Please see response to Comment 3.12.1. The Co-lead agencies are aware that the Pechanga Band is federally recognized. "Government-to-government" consultation to share the referenced locational information will occur during the project-level studies. As part of this consultation, assurances will be made that sensitive information will not become public record.</p> <p>The Co-lead agencies have contacted the Pechanga Band to continue their consultation.</p>
Standard Response 3.15.1	<p>In Section 3.15 and Appendix 3.15-C of the Program EIR/EIS, threatened and endangered species are identified under <i>Sensitive Plant and Sensitive Animal Species</i> for study corridors in each of the five regions. For example, the Least Bells vireo and the vernal pool fairy shrimp are both identified on page 3.15-7 for the Bay Area to Merced region and are shown in the red-orange color on Figure 3.15-1 as state and federal threatened and endangered species habitat areas. Information received regarding species during circulation of the Program EIR/EIS, will be reviewed and verified during project-level environmental review of specific HST alignment and profile options. At the project-level, the data used for the Program EIR/EIS would be updated and augmented with field studies to determine potential impacts (direct and indirect) to protected and listed species and to prepare biological assessments.</p>
Standard Response 3.15.2	<p>The available databases, along with critical habitat maps, identify the species and habitat types which may be found in the areas crossed by potential HST alignments, which is appropriate so that this program-level analysis can generally consider potential impacts to sensitive wildlife resources and habitat on a systemwide basis at a consistent level of detail.</p> <p>The Co-lead agencies agree that the HST project would have effects on the environment, as discussed and described in Chapter 3 of the Draft Program EIR/EIS. The Program EIR/EIS evaluates such impacts not only to humans but also to the natural environment, including endangered and threatened species – please see Section 3.15, Biological Resources and Wetlands.</p> <p>A number of comments raised concerns regarding the general level of detail of the biological analyses in the Draft Program EIR/EIS and requested more detailed analyses. Methods of impact evaluation for the project were developed with input from both state and federal resource agencies. As noted on page 3.0-3 of the Draft Program EIR/EIS, "The agencies acknowledged that this is a planning-level EIR/EIS aimed at making broad decisions about whether to pursue a high-speed train as a means of intercity travel in California, and if pursued to help determine corridors and alignments to carry forward to project-level environmental evaluation." The Program EIR/EIS does not purport to be able to identify all of the detailed impacts of each option but rather focuses on identifying and describing key differences in potential impacts for each of the</p>

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	<p>alternatives.</p> <p>The Program EIR/EIS places appropriate emphasis on biological resources and contains four appendices providing additional information on biological resources. In particular, Appendix 3.15-D provides a detailed tabulation of biological resources and wetlands.</p> <p>Table 3.15-1 in the Program EIR/EIS identifies acreage of sensitive vegetation, presence of wildlife movement corridors, linear feet of jurisdictional waters, acreage of wetlands, presence of anadromous fish, and the number of special status species for each region of each alternative. Although comments correctly point out that there is additional information available on biological resources for portions of the corridor (e.g. information generated in the Central Valley for the UC Merced EIR), this information was of a site-specific nature and use of such information might unreasonably skew perceptions of impacts. For example, if a large number of biological resources had been identified in an area studied for the UC Merced EIR, the area might appear more biologically sensitive than another area for which such detailed studies were not available, even though the other area might contain more sensitive habitats and species of concern.</p> <p>Additional information on special status species and sensitive habitats is available in the Technical Evaluations for Biological Resources, which were conducted for each HST region. These studies are available for review on the California High Speed Rail Authority website (http://www.cahighspeedrail.ca.gov/eir/regional_studies/default.asp). For example, the Bay Area to Merced Biological Resources Evaluation contains tables listing all of the special status species present along the project alignments and the acreage of habitat present along each alternative. Table 4a lists special status plants, and Table 4b lists special status wildlife. Similar information is included in Table 3 of the Sacramento to Bakersfield Biological Resources Evaluation, Tables 2.3-1 and 2.4-1 in the Bakersfield to Los Angeles Biological Resources Evaluation, Tables 2.3-1, 2.3-2, 2.4-1 and 2.4-2 in the Los Angeles to San Diego via Inland Empire Biological Resources Evaluation, and Tables 2-2 and 2-3 in the Los Angeles-Orange County-San Diego Biological Resources Evaluation.</p> <p>Additional detailed information regarding potentially affected species will be provided in the subsequent project-level environmental evaluation and documentation. This information will include species descriptions, distribution, seasonal activity, range, reproduction, habitat characteristics, population status, threats, conservation status, and a detailed evaluation of effects of the project and proposed mitigation.</p> <p>To provide a consistent level of analysis for all alternatives, corridors, and alignments, data collection relied on reference sources that provided geospatial data for biological resources. Please refer to Appendix 3.15-C of the Draft Program EIR/EIS for a discussion of data collection for natural resources. Because of the</p>

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	<p>geographic magnitude of the project and alternatives under study, field studies of the project area were not feasible at this program level. Access to all properties under consideration for project alternative alignments was not available, and spot checks of selected areas of alternatives was not deemed appropriate in that it would not provide the same level of analysis for the entire proposed corridor/alignment.</p> <p>Use of geospatial data provides an objective comparison of potential impacts. Comments correctly point out that this type of analysis does not always allow for an evaluation of relative quality or importance of habitat within the project area, and it is agreed that this additional analysis will be needed as part of the project-level environmental documentation. Please refer to Section 3.15.6, Subsequent Analysis, on page 3.15.31 of the Draft Program EIR/EIS, which identifies a lengthy list of additional studies that will need to be performed as part of the project-level studies to identify project-specific impacts.</p> <p>Detailed field surveys for biological resources will need to be conducted as part of the project-level environmental documentation, including focused surveys following resource agency protocols for special-status species. Field surveys will include evaluation of the quality of habitats crossed by the project, which will enable refinement of alignments to avoid, to the extent possible, the most sensitive and highest quality habitats within the overall corridor.</p> <p>The Program EIR/EIS provides sufficient information to allow decisions regarding the appropriateness of pursuing the HST Alternative, and the Co-lead agencies have determined that the HST Alternative is the preferred alternative. The Co-lead agencies acknowledge that a large amount of additional analysis will be necessary at a project level. Please see response O042-1 for more information on the subsequent studies and project-level studies.</p> <p>Please also see standard response 3.15.1.</p>
Standard Response 3.15.3	<p>The specific use or placement of excavation material from tunneling cannot be determined at the program level of environmental study and will be addressed during subsequent project-level environmental analysis. See new section 3.18, which provides a general discussion of potential construction impacts. See also "Design Practices" added to each section of Chapter 3 of the Final Program EIR/EIS, which describes special construction techniques to be applied to reduce or to limit potential impacts in some areas. Depending on the suitability of the excavated materials, much of it can likely be used as fill material, or as aggregate for the concrete and sub-ballast for the HSR infrastructure. The current conceptual profiles for the HST alignment options considered in the Program EIR/EIS include the placement of all materials excavated from tunnels to be used as fill material along that HST alignment.</p>

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	<p>Wildlife movement patterns are briefly addressed for each of the regions (see for example, 3.15-7), but would receive additional study during project-level environmental reviews, should a decision to pursue HST development be made. Please see standard response 3.15.2 regarding field studies. Background growth is evaluated in the Program EIR/EIS in Chapter 5, Economic Growth and Related Impacts.</p> <p>Uses of excavated materials will, in part, be determined by the timing of project construction. At any point in time, various construction projects (with environmental clearance) will have the need for disposition or use of fill material. Projects can and will coordinate exchange of such materials to the ultimate benefit of each. Overall, efforts will be made to balance for the HST Project the amount of excavated materials with the levels needed for fill elsewhere along the project. Impacts associated with excavation, tunneling, and fill are discussed in Chapter 3 of the Program EIR/EIS.</p> <p>Effects on wildlife movement corridors were considered in the Draft Program EIR/EIS, and additional analysis will be conducted at a project level. As noted on page 3.15.31 of the Draft Program EIR/EIS, the Program document has identified major wildlife movement/migration corridors within the study area, but further study needs to be done on movement/migration corridors: "Field studies could identify additional locally significant corridors and provide data to assist in the design of bridges and wildlife crossings at crucial travel route points." Measures to mitigate effects of the HST Project on animal movements and corridors have been added to the Final Program EIR/EIS and are provided in Section 3.15.6.</p>
Standard Response 3.15.4	<p>This is a Program EIR/EIS that would be followed by project-level environmental reviews that assess and address site-specific issues. Please see standard response 3.15.2 regarding the methodology for evaluating effects on biological resources. Given the vast geographic coverage of the alternatives evaluated in the Program EIR/EIS, it was necessary to make use of computer generated data. More detailed studies will be completed as part of the project-level evaluations. Please see standard response 3.15.13 for more information on these subsequent studies.</p> <p>The Draft Program EIR/S acknowledged that the project alternatives have the potential to result in habitat fragmentation, but the analysis is necessarily more general in nature until a project-level assessment of habitat fragmentation is completed. As noted on page 3.15-18 of the Draft Program EIR/EIS, "Table 3.15-1 summarizes the potential direct and indirect impacts on biological resources and wetlands from disturbance to or fragmentation of habitat due to construction and operation of the Modal and HST Alternatives."</p> <p>Measures to mitigate the effects of the HST Project on habitat fragmentation have been added to the Final Program EIR/EIS, 3.15.6.</p>

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Standard Response 3.15.5	<p>Where the HST alignment is at-grade (i.e., at ground level and not in tunnel nor on an aerial structure), it often is near or within an existing transportation corridor. A review of Figures 2.7.4, 2.7.6A, 2.7.6B, 2.7.8, 2.7.10, and 2.7.12 of the Program EIR/EIS show that 68% percent of the adopted HST alignments are either within or adjacent to a major existing transportation corridor (existing railroad or highway right-of-way). These existing transportation corridors have already divided properties through which the HST alignments would pass that would help minimize potential impacts from the HST service. Moreover, portions of the alignment would be on aerial structure or in tunnel, allowing for vehicular or pedestrian access across the alignment. Of the remaining portion of the HST alignments that are not within or adjacent to a transportation right-of-way, portions of the alignment would be on an aerial structure or in tunnel and allow for vehicular (including farm vehicles) and pedestrian access across the alignment.</p> <p>The remaining portion of the HST alignment – the portion that is at-grade (not on aerial structure and not in tunnel) and not within or adjacent to an existing transportation right-of way – represents 24% percent of the HST overall alignment. For this portion, there would be greater potential to divide or sever properties and affect access to either side of the HST alignment. For these areas, underpasses or overpasses will be constructed at reasonable intervals to mitigate the reduced access to adjoining property, and/or appropriate severance payments would be made to the property owners whose land is severed. The Authority would work directly with land owners during the final design of the system regarding the location(s) for access passages (overpasses or underpasses) to enable adequate property access.</p> <p>Impacts to groundwater will vary across the entire system. For the portions of the HST system in tunnel, geologic exploration including groundwater sampling will be completed prior to constructing the proposed tunnels. The geologic/soils/groundwater conditions will be evaluated prior to and monitored during construction to aid in the development of construction techniques and measures to minimize effects to ground- and surface water resources. Based on available geologic information and previous tunneling projects in proximity to the proposed tunnels, site specific analysis will be preformed. For the Program EIR/EIS, it is assumed the tunnels will be fully lined with impermeable material to prevent infiltration of ground- or surface waters. Infiltration of ground and surface waters into tunnels undesirable for operations and maintenance as well as for potential impacts to waters. All reasonable measures would be taken to avoid water infiltration.</p>

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Standard Response 3.15.6	<p>In evaluating alternatives, every effort has been made by the Co-lead agencies to carry forward those options that are likely to include the least environmentally damaging practicable alternative (LEDPA). The nature and large geographic extent of the project precludes total avoidance of jurisdictional resources. Yet, even at this stage, every effort has been made to avoid wetland resources using available geospatial data.</p> <p>As the HST Project progresses through subsequent design and environmental analyses, more detailed analyses will be undertaken and additional avoidance and mitigation techniques for waters of the U.S. will be applied. For example, a critical mitigation strategy identified in the Draft Program EIR/EIS is adjustment of alignments within an overall corridor and/or construction of structures above grade or in tunnels to avoid impacts. Also, avoidance includes set back of structures from waters edge where water crossing is needed.</p> <p>A good example of this is evident in the Antelope Valley Alternative selected by the Co-Lead Agencies for further evaluation in the next phase of the HST program. For the SR 58/Soledad Canyon (3.5% maximum grade) alternative, the Draft Program EIR/EIS notes the relatively wide corridor area included both the SR-14 and UPRR alignments between Antelope Valley and Santa Clarita. A footnote indicates that, while the SR-14 between Antelope Valley and Santa Clarita was previously recommended for elimination, it was subsequently determined that the Soledad Canyon corridor should be defined to include the SR-14 alignment option. This inclusion of the SR-14 option is particularly significant in providing the opportunity to further reduce potential impacts identified for the Antelope Valley alignment in the Program EIR/EIS.</p> <p>Prior screening evaluations indicated that various biological, hydrology/water quality, cultural, and other natural resource impacts associated with the Soledad Canyon alignment (as mapped in all of the figures in the Draft Program EIR/EIS to generally align with Soledad Canyon Road from Acton to Soledad) would be reduced with an alignment following SR-14 through this reach. With the Soledad Canyon and the S-14 corridors, there are multiple alignments that will be assessed in a project-level review. The combination of cut-and-fill, bridging, and tunneling could be analyzed for the Soledad Canyon and SR-14 alignments to identify a LEDPA and could be accomplished without the need for inclusion of the I-5 corridor analysis.</p>
Standard Response 3.15.7	<p>Please refer to Standard Response 3.15.6 regarding ways to avoid or minimize impacts to waters of the U.S. and the continued evaluation of the LEDPA during project-level studies. Detailed mapping of individual jurisdictional features is not practical at this stage of planning but will be done during the project-level environmental analyses. The Program EIR/EIS concludes that the modal alternative has the potential to affect a larger amount of jurisdictional resources than the HST alternative (see Table 3.15-1 in the Program EIR/EIS).</p>

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	<p>The Co-lead agencies note that the overall analytic approach to the Draft Program EIR/EIS yielded calculations/figures that were that reflected the potential affected environment, given the large area of coverage (i.e., the “envelope” on either side of the alignment) that was used to identify potential impacts for review of wetlands, streams, lakes, and habitat area. With the large envelopes used for these environmental features, the values provided in Table 3.15-1 of the Draft Program EIR/EIS cannot and should not be interpreted as actual areas of impact. This would substantially overstate actual direct or indirect impacts that might occur.</p> <p>Table 3.15.1A has been added to the Final Program EIR/EIS showing a comparison between the worst case “affected area” and a representative estimate of possible direct impacts. These calculations take no credit for potential application of minimization measures that would be studied in project level, Tier-2 environmental reviews. As seen on the table, an estimate of actual impacts for wetland, streams, lakes, and habitat areas is substantially less for all subjects than the area within the designated “envelopes” for these environmental resources. The envelope calculations are useful mainly for comparisons of alignments or alternatives and with the potentially affected envelopes and other information can be useful in determining the likely level of impact for any given alignment or alternative.</p> <p>The Co-lead agencies also note that alignments can and will be shifted within the analysis envelope in project level, Tier-2 studies to further minimize or avoid impacts, as described above for the Antelope Valley, for example.</p> <p>Moreover the Co-lead agencies understand that, if impacts to water resources cannot ultimately be avoided, the agencies will need to demonstrate – as part of the project-level evaluation – how cost, logistical, or technological constraints have precluded avoidance of these resources.</p> <p>Regarding future studies of HST alignment options between the Central Valley and the San Francisco Bay area please see Standard Response 6.3.1. The HSR Authority has eliminated from further consideration the alignment options passing through or under Henry Coe State Park and the Orestimba State Wilderness.</p>
Standard Response 3.15.8	<p>As noted on page 3.14-3 of the Draft Program EIR/EIS “Waters with impaired water quality, i.e., water identified on the Section 303(d) CWA list distributed by SWRCB, in the study area were identified.”</p> <p>Information on 303(d) listed streams crossed by the project can be found in the following Hydrology and Water Quality Technical Evaluations for the Draft Program EIR/EIS: Bay Area to Merced, Tables 3 and 4; Los Angeles to San Diego via Inland Empire, Table 2.5-3; Los Angeles-Orange County-San Diego, Table 2-2. Technical reports that served as background information for the Program EIR/EIS have been and remain available for review on the California High Speed Rail Authority website:</p>

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	<p>http://www.cahighspeedrail.ca.gov/eir/regional_studies/default.asp.</p> <p>A list of 303(d) streams and the general area of impact has been added to Appendix 3.14-C of the Final Program EIR/EIS along with a generalized calculation of linear feet of possible direct impact. Mitigation measures for impacts to these streams were provided on pg. 3.14-18 of the Draft Program EIR/EIS.</p> <p>Mitigation strategies for avoiding water quality impacts to surface water bodies crossed by the project (including 303(d) listed streams) were presented on pages 3.14-18 and 3.14-19 of the Draft Program EIR/EIS. The project would include best management practices (BMPs) to minimize both construction and operational impacts of facilities, and additional measures have been added to the Final Program EIR/EIS.</p> <p>Further analyses that would be conducted as part of the project-level studies were identified on pages 3.14-19 and 3.14-20 of the Draft Program EIR/EIS. This list has been expanded in response to this comment. It is expected that with implementation of appropriate mitigation, further impairment of listed streams can be substantially avoided.</p>
Standard Response 3.15.9	<p>As noted in Response 3.15.5, 68% percent of the preferred HST alignments are within or adjacent to existing transportation corridors that may present an existing barrier to wildlife movement, and portions of the remaining HST alignments are on aerial structure or in tunnel. Therefore, only 24% percent of the HST alignment would represent entirely new barriers to wildlife migration corridors in specific areas. Given that the HST project would include mitigation to maintain wildlife corridors, it is not expected that there would be “miles of continuous barrier to animal movement”. The Co-lead agencies recognize that portions of the HST alignment may potentially affect sensitive environmental areas, including documented wildlife movement corridors. In these areas site-specific profile and alignment adjustments can be considered to avoid, minimize and/or mitigate any potential impacts.</p> <p>Effects on wildlife movement corridors were considered in the Draft Program EIR/EIS, and additional analysis will be conducted at a project level. Table 3.15-1 in the Draft Program EIR/EIS identified the presence of wildlife movement corridors in the regions crossed by the project and a discussion of landscape-level movement corridors was provided for each region. See, for example, the discussion of wildlife movement/migration corridors in the Bakersfield to Los Angeles region on pages 3.15-11 and 3.15-12 of the Draft Program EIR/EIS. As noted on page 3.15.31 of the Draft Program EIR/EIS, major wildlife movement/migration corridors within the study area were identified, but further project level study needs to be done: “Field studies could identify additional locally significant corridors and provide data to assist in the design of bridges and wildlife crossings at crucial travel route points.” Project-level studies will identify areas where it is important to maintain connectivity and will ensure that sufficient mitigation is included to maintain</p>

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	<p>movement corridors. Two figures (Figure 3.157.1A and Figure 3.15.1B) have been added to the Final Program EIR/EIS illustrating known wildlife movement corridors in relation to all HST alignment options considered.</p> <p>The Co-lead agencies recognize that the HST alignments will, at times, present more of a barrier to wildlife movement, given that it will be fenced and designed to prohibit access, as compared to some narrow roadways or railroad rights-of-way. Section 3.15.6 includes mitigation measures for wildlife corridors and movement. As noted, wildlife underpasses or overpasses will be added to the HST at-grade alignments, where appropriate, to reduce the overall effects on wildlife corridors and movements.</p>
Standard Response 3.15.10	<p>Page 3.15-3 of the Draft Program EIR/EIS included a list of significance criteria and the following criterion: "Potential conflict with the provisions of an adopted habitat conservation plan (HCP), natural community conservation plan (NCCP), or other approved local, regional, or state habitat conservation plan." The discussion of Biological Resources and Wetlands by Region, which begins on page 3.15-6 of the Draft Program EIR/EIS, included a section on Conservation Plans in each of the five regions. Conservation plans cited in the Program EIR/EIS include:</p> <p><u>Bay Area to Merced</u></p> <p>South Bay Salt Pond Restoration Project California tiger salamander critical habitat (potential USFWS proposal) Nature Conservancy Mount Hamilton Project</p> <p><u>Sacramento to Bakersfield</u></p> <p>Eastern Merced County NCCP/HCP Kern Valley Floor Multi Species HCP 36 other NCCP/HCPs within the San Joaquin Bioregion</p> <p><u>Bakersfield to Los Angeles</u></p> <p>Kern Valley Floor Multi Species HCP Kern County Metropolitan Bakersfield HCP Coles Levee Ecosystem Reserve</p>

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	<p>Kern Water Bank Authority Chevron-Lokern Conservation Bank Lost Hills District Mitigation Bank</p> <p><u>Los Angeles to San Diego via Inland Empire</u> San Diego County MSCP North San Diego County MSCP</p> <p><u>Los Angeles to San Diego via Orange County</u> Potential critical habitat for San Diego fairy shrimp, tidewater goby, coastal California gnatcatcher and least Bell's vireo Batiquitos Lagoon State Ecological Reserve San Elijo Lagoon State Ecological Reserve San Dieguito Lagoon State Ecological Reserve Los Penasquitos Lagoon State Preserve</p> <p>Other HCPs and NCCPs are currently in process and it is agreed that, as project planning proceeds, it will be important for the Co-lead agencies to participate in conservation planning efforts in areas that would be affected by the HST Project.</p> <p>During the preliminary evaluation of alternatives that was conducted as part of the Program EIR/EIS, the scale and scope of options that were under consideration precluded such involvement as site-specific conservation planning for potentially affected areas under consideration. Once the preferred system alternative and corridors are selected, it will be appropriate to work with the preparers of these plans, during project-level evaluation, to review ways to avoid conflicts to the extent possible and to refine plans to accommodate alignments, where necessary.</p> <p>It is the intent of the Co-lead agencies to avoid conflicts with reserve systems, to the extent feasible. As noted on page 3.15-31 of the Draft Program EIR/EIS in the section on mitigation strategies, "Special mitigation needs would be considered in the future with the appropriate authorities that are responsible for</p>

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	regional mitigation (conservation) banks, HCPs, NCCPs, or special area management plans. Mitigation may include consideration of acquisition, preservation, or restoration of habitats, or relocation of sensitive species. Specific mitigation measures would be identified at the project level of environmental review."
Standard Response 3.15.11	<p>The basis for the conclusion regarding the comparative impacts of the SR-58/Soledad Canyon Alignment and the I-5 Alignment was explained on page 3.15-25 of the Draft Program EIR/EIS. As stated, there: "a greater proportion of the I-5 route would be in tunnels or on an elevated structure, which would reduce potential impacts on sensitive biological resources. Tunneling and elevated structure construction types could avoid potential impacts on wildlife movement/ migration corridors along the I-5 route.</p> <p>In contrast, there would be very limited sections of tunnel and elevated structure along the SR-58/Soledad Canyon route, particularly where this route parallels the Santa Clara River. Potential impacts on sensitive plants and wildlife, as well as on major wildlife movement/migration corridors, would therefore be expected to be greater due to the use of cut-and-fill construction techniques."</p> <p>The Draft Program EIR/EIS noted that the SR 58/Soledad Canyon (3.5% maximum grade) alternative includes the relatively wide corridor area between and including both the SR-14 and UPRR alignments between Antelope Valley and Santa Clarita. A footnote indicated that, while the SR-14 between Antelope Valley and Santa Clarita was previously recommended for elimination, it was subsequently determined that the Soledad Canyon corridor should be defined to include the SR-14 alignment option. This is particularly significant in enabling further reductions in potential impacts identified for the Antelope Valley alignment in the Program EIR/EIS. Prior screening evaluations indicated that various biological, hydrology/water quality, cultural and other natural resource impacts associated with the Soledad Canyon alignment (as mapped in all of the figures in the DEIR/S to generally align with Soledad Canyon Road from Acton to Soledad) would be reduced with an alignment following SR-14 through this reach. With the availability of the Soledad Canyon and the S-14 corridors, there are multiple alternatives that would be looked at in a project-level review. The multiple combinations of cut-and-fill, bridging, and tunneling would be analyzed for the Soledad Canyon and SR-14 alignments to produce a LEDPA. This can be accomplished without further consideration of the I-5 corridor analysis.</p> <p>The Authority has identified the Antelope Valley as preferred rather than the I-5 Corridor for further future consideration. The I-5 corridor alignment, had it been adopted, would not reduce traffic and air quality impacts associated with the Antelope Valley area. Use of HST could substantially reduce the number of auto commuters from the Antelope Valley into the Los Angeles area, providing air quality benefits.</p> <p>The I-5 Corridor would have more adverse impacts and is not the environmentally superior route in the</p>

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	<p>following critical areas:</p> <ul style="list-style-type: none"> ▪ Greatest potential for impacts to prime farmland ▪ Groundwater Impacts in the I-5 corridor would be greater ▪ Higher potential for damage to Section 4(f) and 6(f) resources ▪ Extensive long tunnels through geologically unstable areas ▪ Would not reduce traffic or air pollution in LA Basin as effectively as SR-58 corridor <p>These reasons are sufficient to eliminate the I-5 corridor from further consideration. Of particular importance are DOT Section 4(f) and 6(f) requirements. These requirements concerning impacts to park lands and historic sites are particularly pertinent to determining a least environmentally damaging practicable alternative (LEDPA). Section 404(b) Guidelines provide for the EPA and Army Corps of Engineers to take into account the requirements of other federal agencies when making LEDPA decisions. The DOT requirements call for selecting the least damaging alternative according to 4(f) and 6(f) criteria. Since the SR-58/Soledad Canyon corridor less potential use of 4(f) and 6(f) resources, it is the superior route according to DOT standards. This factor, coupled with the other substantial impacts and limitations of the I-5 corridor discussed above, warrants elimination of the I-5 corridor from further consideration at the project-level.</p> <p>Removal of the I-5 corridor from further consideration in a project level analysis would not prevent the process from moving forward. The SR-58/Soledad Canyon corridor analyses could be developed in detail in the project-level analysis. The Program EIR/EIS provides information on a corridor that encompasses the Soledad Canyon route, parallel to the Santa Clara River and a route that parallels SR-14 (Antelope Freeway). Please refer to standard response 3.15.10 regarding evaluation of effects on HCPs.</p>
Standard Response 3.15.13	<p>A substantial number of comments received on the Draft Program EIR/EIS assert that the Program-level analysis presented in the Draft Program EIR/EIS is not sufficient to support decision making by the Co-lead agencies. This response amplifies and clarifies the nature of the programmatic decision and the nature of the Program EIR/EIS. Please see Section 1.1 of the Final Program EIR/EIS regarding the nature of the programmatic project, programmatic decisions and the tiering approach to the environmental review.</p> <p>The Co-lead agencies plan to use the program-level Program EIR/EIS for the following two decisions:</p> <ol style="list-style-type: none"> 1. To decide whether to pursue a high speed train system, involving steel-wheel-on-steel-rail technology along certain conceptual corridors shown in Figures 2.6-13 and 2.6-14 and designed to help meet California's increasing demand for transportation, versus doing nothing, or recommending a modal

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	<p>alternative; and</p> <p>2. To determine which of the conceptual corridors, alignments, and station options evaluated in the Program EIR/EIS can be eliminated from consideration and which to select for further consideration in the tiered environmental reviews to be prepared subsequent to the Program EIR/EIS, if the Co-lead agencies choose to pursue the high speed train system.</p> <p>The Co-lead agencies believe that the programmatic level of analysis presented in the Program EIR/EIS is appropriate for making these two basic decisions. It analyzes the environmental effects at a more generalized level to provide the decision makers with sufficient information to decide whether to continue with the process to pursue a high-speed rail system, and which conceptual corridor alignments to continue to consider. If the Co-lead agencies decide to do so, they will consider the more site-specific decisions in the more detailed second tier environmental review and decision making.</p> <p>Both CEQA and NEPA require that an agency consider the environmental effects of its actions at the earliest point in time when the analysis is meaningful, and it is within the agencies' discretion to fashion an environmental process appropriate to the type of decisions they are considering. The Co-lead Agencies considered several approaches in deciding how to complete an environmental analysis of the proposed HSRA system that would provide accurate and meaningful information to the public and decision-makers. They decided the most useful approach was a two-step approach. The first step was to prepare a program-level, more generalized environmental analysis that compares the HST alternative with an alternative that accommodated increased travel demand by expanding existing facilities (roads and airports) and a No Action alternative, and evaluates conceptual HST alignment corridors and station options. Since the sheer size and extent of the proposed HST system precludes preparing a detailed project-level environmental analysis on all reasonable corridor alignments, by proceeding with the programmatic document, the decision makers and the public will have the benefit of environmental review of the broad policy-level decisions early in the process, at a point in time when the basic decisions are being considered. This first step, which is analyzed in this Programmatic EIR/EIS, will not authorize specific construction of the project or identify the precise alignment. Subsequent to making programmatic decisions on mode and general location, site-specific environmental impacts related to planned improvements and facilities will be evaluated in project-level environmental analysis and review.</p> <p>The Program EIR/EIS will be used to shape the parameters for the more detailed environmental documents for the second-tier of decisions. The project-level, second-tier environmental reviews will fully describe site-specific environmental impacts of alternatives within selected corridors and at station locations and specific</p>

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	<p>mitigation measures will be proposed to address those impacts. In some cases, preparation of the project-level studies may include alternative screening analysis of site-specific design options to focus on a range of the most promising alternatives.</p> <p>An important part of completing the project-level, second-tier evaluations will be to prepare preliminary designs for each of the project alternatives under consideration. The information collected in this program environmental process, including public comments, will be used to help develop project level alignment design alternatives that avoid and minimize environmental impacts. Two such examples are: locating alignments to avoid sensitive habitats, and designing alignment features that minimize impacts (e.g. using aerial structures, culverts, and overpasses to prevent fragmenting wildlife corridors). Project alternatives would be designed and evaluated in detail for environmental impacts at the second-tier project level. This process would also involve public and agency feedback so that, if environmental impacts of a specific design are identified, the Authority could consider ways of changing the design to reduce or eliminate those impacts.</p> <p>As a programmatic-level document, the Program EIR/EIS does not analyze site-specific impacts of potential alignments or stations, and therefore it cannot predict with certainty, which impacts will occur and what site-specific mitigation measures are appropriate for the second-tier level of actions. Consequently, the Program EIR/EIS describes mitigation strategies, which are approaches tailored to address the types of impacts anticipated as a result of construction of the HST system. These strategies will provide the basis to structure more site-specific measures when more detailed data on the impacts is available at the second-tier. In addition, the Authority has committed to design practices and policies that will be used to develop alternatives at the project-level to avoid impacts and to help shape specific mitigation measures.</p> <p>The Co-lead agencies acknowledge that detailed environmental data has not been collected or analyzed at this stage or tier of the environmental review process. For certain corridors, it may be possible to eliminate alignment options based on the data in this Program EIR/EIS. However, for others it will be necessary to perform additional analyses of more than one corridor alignment option in future environmental studies.</p> <p>For example, the Co-lead agencies are proposing to continue and add to their evaluation of HST alignment options between the Central Valley and the San Francisco Bay area subsequent to completion of this Program EIR/EIS. Further investigation has been recommended to select a preferred alignment option from within a broad conceptual corridor, which excludes alignment options through Henry Coe State Park and the Orestimba State Wilderness. The study should consider alignment options between (and including) the Pacheco Pass Corridor (SR-152) to the south and the Altamont Pass Corridor (I-580) to the north.</p> <p>As part of this additional analysis, existing alignment options (i.e., the Pacheco Pass and Northern Tunnel -</p>

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	<p>north of Henry Coe State Park and the Orestimba State Wilderness) will be refined based on comments received from the public during the comment period on the Program EIR/EIS. It is anticipated that a corridor alignment option for Altamont Pass, with design variations as appropriate, will be developed, and that stakeholder and interagency coordination will play a major role in the definition of this alignment and its design variations.</p> <p>The Program EIR/EIS clearly shows that the Modal Alternative (meeting California's growing transportation demand by widening highways and expanding airports) will have greater environmental impacts than the proposed HST Alternative (constructing a high speed rail network to accommodate a portion of future transportation demand). This conclusion is logical since the HST Alternative follows many of the same corridor alignments as the Modal Alternative but is more compact than widened highways. The HST Alternative would have environmental impacts, but they would generally be lower than those in the Modal Alternative.</p> <p>Many of the comments received on the Draft Program EIR/EIS suggest that not enough environmental data has been analyzed in the Program EIR/EIS to identify a preferred alignment. Many of the commentors failed to distinguish between the general corridors being considered in this Program EIR/EIS and the site-specific alignments that would only be considered later in project level environmental review. The Co-lead agencies agree that the Program EIR/EIS may not provide enough information to select a single conceptual corridor alignment option in every case, but find that the environmental data is sufficient to eliminate many of the conceptual alignment options that have been considered. Furthermore, in some cases additional alignment options need to be added to the analysis (for example the Altamont Pass option) and will be included in subsequent environmental review.</p> <p>Finally, the analysis provided in the Program EIR/EIS addresses potential impacts based on defined "envelopes" (band-widths) for the impact zones in order to broadly recognize potentially affected resources and to opt, given uncertainties of planning level analysis, to assume the maximum potential for impacts – please see standard response 3.15.7 and Final Program EIR/EIS, section S.6. Given the general nature of the data and analysis at this point in the process, the Co-lead agencies have a limited ability to predict the precise character, location and extent of environmental impacts. As a result, the assumptions and conclusions throughout the document generally reflect the maximum level adverse effects, even though it is anticipated that as the analysis is refined through second-tier design and environmental review, the ultimate impacts are likely to be less. Nevertheless, the conceptual "envelope" calculations are useful for policy-level comparisons of modal alternatives and conceptual corridor alignments.</p>

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	<p>The Program level analysis has shown that the HST system would have fewer environmental impacts than the Modal Alternative, and depending on the particular resource areas, more or fewer impacts than No Action. This program environmental analysis has contributed to informing public policy choices by addressing (at the planning level) the question of how growing statewide transportation demand can be accommodated in the future. Without this evaluation of a comprehensive new transportation network that addresses regional and statewide impacts (the proposed HST system), the expansion of highways and airports needed to meet statewide transportation demand would likely have only been considered in separate and uncoordinated planning and project environmental documents. In summary, the Co-lead agencies acknowledge the desire expressed in many of the comments to evaluate the environmental impacts of the proposed HST system at a precise level of detail. The Co-lead agencies agree with this goal, but have decided to use the two-step approach of, first preparing a program level analysis and determining whether to pursue the HST system with identified corridor alignment options for detailed study, and then as a subsequent step, completing a detailed environmental analysis of alignments and stations, as the most practical, effective and informative process for achieving this goal.</p>
Standard Response 3.16.1	<p>A key objective for the proposed HST system is to avoid and/or minimize the potential impacts to cultural, park, and recreational resources and wildlife refuges. The development of HST alignment and station options for the Draft Program EIR/EIS included an extensive screening analysis in which many alignment and station options were eliminated from further consideration according to several criteria including high potential for impacts on park and recreational resources. The remaining alignment and station options were analyzed in the Program EIR/EIS and potential impacts were identified and compared. This information was considered and influenced the identification of a preferred system of alignment and station options. In identifying a preferred HST system many additional alignment and station options were also eliminated from further consideration according to several criteria including high potential for impacts on park and recreational resources (e.g., the northern mountain crossing alignment options that traversed Henry Coe State Park, See Standard Response 6.3.1). Subsequent preliminary engineering and project level environmental review will provide further opportunities to avoid and minimize the potential use of 4(f) and 6(f) resources.</p>
Standard Response 3.17.1	<p>The revised cumulative impact analysis for the Program EIR/EIS is found in Chapter 3, Section 3.17. As provided for in CEQA and NEPA for program documents, this Program EIR/EIS generally analyzes broad environmental effects of the program for the high-speed train system and alternatives. Site-specific environmental review will be required for implementation of the various elements of the program. Following this directive, the cumulative impacts in the Program EIR/EIS are analyzed at a broad landscape-level scale</p>

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	<p>because of the general nature of the program description. Consideration of project-specific and local area cumulative effects, including specific urban development and the parties that would be responsible for mitigating the more localized adverse cumulative impacts, will be undertaken as part of future project level environmental review. Consideration of the indirect effects related to the reasonably foreseeable population and employment growth that could result from the proposed action and alternatives, as may be identified in local agency general plans and other planning documents, is addressed in Chapter 5, <i>Economic Growth and Related Impacts</i>.</p> <p>The cumulative impact analysis in the Program EIR/EIS focuses on the resources potentially affected by the proposed action and alternatives and identifies where there may be impacts to these resources, when considering past, present, and reasonably foreseeable future actions. Under CEQA, lead agencies may use a “list” approach to identify related projects for analysis, or may base the identification of cumulative impacts on a summary of “projections” in an adopted general plan or related planning document. CEQ’s guidance is consistent with CEQA’s approach.</p> <p>In this Program EIS/EIR, both the list and projections approaches have been adapted and used. The cumulative impact analysis focuses on other broad regional/statewide past, present and probable future projects, including other highway improvements and transit projects within the study area and within the same areas of potential effect evaluated for the specific corridors included as part of the No Project, Modal, and HST Alternative alignments. Although both CEQA and NEPA include the requirement to consider “past projects” when addressing cumulative impacts, recent CEQ guidance discounts the value of this assessment of past projects directing that relevance of addressing past projects relates to the “concise description of the identifiable present effects” (CEQ June 24, 2005 Memorandum). Because of the population growth potential and the proximity to study corridors and stations analyzed in this environmental document, a few other major projects are also considered as part of the cumulative analysis, including the UC at Merced campus. Appendix 3.17-A lists the projects identified for consideration in this cumulative impact analysis. While other project-specific actions may be likely to occur in the study area by 2020, this Program EIR/EIS analyzes the broad environmental issues based on the broad program definition and the regional statewide cumulative impacts and, therefore, does not consider the more localized cumulative issues related to subsequent approvals. Information from existing environmental documents completed for regional projects, such as regional transportation plans that include the highway and airport improvement projects approved for future implementation under the No Project Alternative and projections made in the state implementation plan for air quality, were used. The list of these projects is included in Chapter 2, <i>Alternatives</i>, Tables 2.5-1 and 2.5-2,</p>

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	<p>and in the air quality section (Section 3.3) of Chapter 3.</p> <p>The cumulative impacts analysis in the Program EIR/EIS identifies projects and programs related to the undertaking being analyzed and evaluates the combined (cumulative) effects of those past, present and reasonably foreseeable projects on the environment. If any cumulative impacts are identified as significant, the analysis then assesses the degree to which the proposed undertaking and alternatives would contribute to those impacts, and identifies mitigation for any contribution evaluated as “cumulatively considerable.” Mitigation is discussed at the program level to avoid, minimize, or compensate for the cumulative impact; specific analysis of localized impacts and related cumulative impacts, as well as mitigation related to these cumulative impacts that could occur for subsequent project-specific approvals, will need to be addressed through project-level CEQA and NEPA compliance.</p>
Standard Response 3.19.1	See Response 3.15.3 and see added Section 3.19 providing discussion of potential impacts from construction activities for a proposed HST system. Also more detailed analysis would be provided in project-level environmental reviews, should a decision be made to proceed with development of a proposed HST system.
Standard Response 3.20.1	<p>The methodologies applied in the program level analysis were developed to identify and highlight areas of potential impact to be avoided and/or considered further during subsequent project level environmental review. If this proposed project is carried to a project level of environmental review, preliminary engineering will be conducted allowing for a greater precision in the location of the proposed HST facilities and their associated right-of-way (ROW) requirements. The project level analysis will provide a more detailed analysis of the potential direct and indirect impacts regarding construction, noise, visual, and traffic. The detail of engineering associated with the project level environmental analysis will allow the Authority to further investigate ways to avoid, minimize and mitigate the potential impacts. Some comments mentioned the types of impacts are highly site-specific in nature. These issues will be addressed during subsequent project level environmental review, based on more precise information regarding location and design of the facilities proposed (e.g., elevated, at-grade, catenary design features, fencing type and location, etc.). The detail of engineering associated with the project level environmental analysis will allow the Authority to further investigate ways to avoid, minimize and mitigate potential impacts. Only after the alignment is refined and the facilities are fully defined through project level analysis, and avoidance and minimization efforts have been exhausted, will specific impacts and mitigation measures be addressed.</p>

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Standard Response 4.2.2	<p>The most common reason for significant increases in project costs is the addition of items not included in the original cost estimates resulting from the project growing beyond the original definition. Examples of additional project elements for an HST system in California could include additional line segments, new alignment options or configurations (tunnel instead of at grade), additional stations or station improvements beyond the level defined in the original estimate, improvements to related facilities such as other commuter or freight rail lines/stations, etc. The Authority intends to control the cost of the project through strict management of the definition and scope of the project. Maintaining focus on the key project elements (those that are vital to the system as defined) is a primary factor in implementing the project within the cost projections.</p> <p>In terms of potential ridership shortfalls, the HST system as described in the Program EIR/EIS would have extensive flexibility to adjust service to meet market demand. The service plans would be defined to meet the current market by adding or subtracting service (more or fewer trains), or modifying the trainsets (more or fewer vehicles per trainset) to best meet the demand at the lowest possible operating costs.</p>
Standard Response 4.4.1	<p>The Program EIR/EIS compares the potential cost of the HST Alternative with the Modal Alternative (which is the cost of making improvements to freeways and airports in an attempt to meet future intercity travel demands) and concludes that the HST Alternative would be two to three times less costly than the Modal Alternative to construct. A Modal Alternative that consisted solely of highway improvements was considered but rejected since it would not meet the purpose and need and objectives of the proposed HST system in terms of reliability, safety, and preservation of the state's natural resources (see page 2-16, Draft Program EIR/EIS).</p> <p>The Authority has concluded that the capital costs of the HST system would need to be largely publicly financed. However, as described in Chapter 2 <i>Alternatives</i>, the Authority also "defined a practical approach to construct, operate, and finance an HST system that would yield solid financial returns to the state and provide transportation benefits to all Californians." (Draft Program EIR/EIS, page 2-6). The fare structure used to produce the ridership and revenue forecasts for the Authority's Business Plan (low-end forecasts) was selected because it increased ridership (e.g., user benefits) while not losing significant passenger revenue, and therefore maximized the potential benefits of the system. Under this fare structure, HST fares were set to equal 50% of the average airfare (at the time of the analysis) for travel between San Francisco and Los Angeles. However, the HST system is expected to be priced based upon the distance traveled, as opposed to air transportation within California where shorter distance intercity trips are often charged substantially higher rates than the longer-distance trips between California's major metropolitan regions. Should the HST project</p>

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	move forward, more detailed analysis regarding potential HST fares will be prepared in the future.
Standard Response 4.5.1	<p>The Program EIR/EIS identifies a HST technology capable of sharing tracks at reduced speeds with other compatible services. As stated in Section 2.6.7, "This state-of-the-art, high-speed, steel-wheel-on-steel-rail technology would operate in the majority of the statewide system in dedicated (exclusive track) configuration. However, where the construction of new separate HST infrastructure would be infeasible, shared track operations would use improved rail infrastructure and electrical propulsion. Potential shared-use corridors would be limited to sections of the statewide system with extensive urban constraints." (Draft Program EIR/EIS, page 2-29) "Physical or temporal separation from conventional freight" was included as part of the general criteria of shared-use corridors. The two segments of the HST system which have been designed as "shared use" are the links between San Francisco and San Jose along the existing Caltrain corridor, and between Los Angeles and Irvine along the LOSSAN corridor. From Sacramento to San Jose, to Los Angeles and San Diego (via Inland Empire), there would be no "conventional" passenger or freight trains sharing tracks with the HST services. The HST system would not be sharing track with conventional freight or passenger train services in any portion of the alignment between Sacramento and Los Angeles, and the Los Angeles to San Diego via the Inland Empire Corridor; thus, there would be no congestion and no congestion delays from conventional services along these routes.</p> <p>Between San Francisco and San Jose, the alignment would be a four-track railroad with the two middle tracks being "shared" by HST service and Caltrain express services. Along this corridor, the two outer tracks would be used for local service and a minimal amount of freight operations. The Caltrain express services and the HST services would operate at similar speeds along this segment with few stops, and therefore little if any degradation in HST wait time or reliability would be expected as a result of shared use along the San Francisco Peninsula.</p> <p>Between Los Angeles and Irvine along the LOSSAN corridor, it is assumed that between Los Angeles and Fullerton the system would be four tracks, with two tracks for passenger services and two tracks for conventional freight. Nevertheless, because of the amount of existing and planned commuter and conventional intercity services on the corridor, it is anticipated that sharing infrastructure on this segment would affect HST operations between Los Angeles and Irvine as documented in Chapter 6 Alignment Options Comparison. The travel time between Los Angeles and Anaheim was estimated at 27 minutes, which is 11 minutes longer than the dedicated alignment option (UP Santa Ana) as a result of the operational constraints and slower speeds of the conventional passenger services. Under Operational Issues for the LOSSAN Corridor</p>

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	alignment options between Los Angeles and Orange County, the Draft Program EIR/EIS states, "Shared-use alignment with delays and capacity constraints due to other rail traffic. Operational analysis suggests a range of between 18 and 45 HST trains a day in each direction, depending on schedule and the effectiveness of a joint operating plan that would have to be developed in partnership with Amtrak and Metrolink. These estimated service levels assumed 16 Amtrak and 29 Metrolink trains daily in each direction." (page 6-83)
Standard Response 4.7.1	<p>The Program EIR/EIS provides a comparison between the No Project, Modal, and HST Alternatives in terms of potential costs (capital and operational), and potential environmental impacts (such as air quality, noise, safety, etc.). The comparison of the three system alternatives is found under the Key Findings (S.5) in the Summary Section of the Program EIR/EIS. This Summary Section also includes the Systemwide Environmental Impact Comparison, which compares the No Project, Modal, and HST Alternatives for key environmental issues. The other sections of the Program EIR/EIS provide the supporting technical information for the No Project, Modal, and HST Alternatives that led to the conclusions of the Summary Section.</p> <p>In 1996, U.C Berkeley published a study entitled The Full Cost of Intercity Transportation: A Comparison of High-Speed Rail, Air, and Highway Transportation in California (Kanafani, U.C. Berkeley, Institute of Transportation Studies, 1996). This study, however, does not present a complete comparison, because it failed to include the highway and air transportation infrastructure improvements (costs or potential environmental impacts) needed to serve California's future intercity travel demands for 2020 and beyond. Professor Kanafani's study also used very different assumptions for an HST system (an "inflexible" system serving mostly the Los Angeles to San Francisco Bay Area market) than those applicable to the proposed HST Alternative described in the Program EIR/EIS. While the Kanafani study did try to quantify some external social costs, it did not consider many areas of potential impact required as part of a formal CEQA and NEPA environmental process (such as this program environmental process undertaken by the co-lead agencies), including potential impacts to the human environment (land use and community impacts, farmlands, aesthetics and visual resources, socioeconomics, utilities and public services, and hazardous materials); cultural resources (archaeological resources, historical properties) and paleontological resources; the natural environment (biological resources, wetlands, hydrology and water resources, geology and seismic hazards); parklands; growth-inducing impacts; and cumulative impacts. Many of these effects are difficult to describe in quantitative terms and to value in monetary terms, and detailed cost-benefit calculations are beyond the scope of this program EIR/EIS.</p>

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Standard Response 5.2.1	<p>The co-lead agencies recognize that analysis assumptions such as development densities are important considerations in assessing potential growth impacts. The EIR/EIS analysis used consistent density assumptions to assess each system alternative. These density assumptions were developed based upon an analysis of development patterns in California over the past decade, and were specific to different regions of the state. The only instance in which the assumptions based on these historical patterns were modified was for a one-mile band around each proposed HST station. In these areas normal market forces were assumed to lead to a slight intensification of development density. This assumption was based upon consideration of relevant research² and a careful review of development experience around high activity intercity rail stations in the United States, Japan and Europe. Details from this review can be found in Section 3.3 of the technical report on economic growth effects³.</p> <p>The approach that was adopted for this analysis assumed market-driven development densities based on recent experience in California. The base approach assumed no regulatory intervention (e.g. new high density zoning around station sites), and the very modest development intensification assumed for the station area was based on market forces observed after the introduction of high-speed type rail services in the U.S. and overseas. If local jurisdictions adopt additional land use strategies to further focus development in the station influence area, the sensitivity analysis detailed in Section 5.1.3 of the technical report indicates that up to 30,000 fewer acres of undeveloped land would be converted to urbanized uses compared to the base analysis. If no development intensification were to occur in the station influence area, including intensification associated with normal market forces, urbanization and associated indirect impacts would likely be on the order of that reported for the Modal Alternative. The assumptions used in this analysis are reasonable and supported by observations throughout the world, and the assumed development intensification reflects a reasonable expectation of market adjustments after 30+ years of potential growth.</p> <p>Results presented in Section 5 of the Program EIR/EIS do not identify any significant impacts from the indirect effects of growth inducement at the program level of analysis. Therefore, it is not necessary to analyze or adopt specific mitigation strategies for indirect effects of growth inducement. Nonetheless, the co-lead</p>

² See, for example: Cervero, Robert and M. Bernick; *Transit Villages in the 21st Century*; McGraw-Hill, 1997; and Cervero, Robert et al; *Land-Use and Development Impacts of BART, BART at 20 Study*; IURD, Monograph 49; 1995.

³ *Economic Growth Effects of the System Alternatives for the Program Environmental Impact Report/Environmental Impact Statement – Final Report*; Cambridge Systematics, Inc.; July 2003. This report is available from the High-Speed Rail Authority, and has been posted on the HSRA website since March 29, 2004.

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	<p>agencies recognize the strong role that development intensification within the station area might play in maximizing systemwide ridership, supporting locally-adopted land use plans, and reducing the extent of potential new urbanization. In recognition of this role, the Final Program EIR/EIS (Summary and Section 6B) states that: as the project proceeds to more detailed study, local government would be expected to provide through planning and zoning for transit-oriented development around HST station locations.</p>
Standard Response 5.2.2	<p>While the indirect impacts are presented in the Program EIR/EIS on a statewide basis, the underlying analysis was performed in a multi-tiered fashion by looking at macroscale economic effects, associating these effects with county-level population and employment changes, and then allocating these changes to development changes within individual hectare grids in each county. Indirect impacts for many resource categories were assessed within the hectare grids, and remaining resource categories were assessed around individual stations or within each county as appropriate. This process is described more fully in Section 5.3.1(C) of the Program EIR/EIS.</p> <p>The co-lead agencies respectfully disagree with the contention that the data and methodology are not sufficient to differentiate between alignment and station options. Sections 4.2 and 5.2 of the technical report on economic growth effects provides a detailed review of growth inducing differences between the alignment and station options, and these differences are fully disclosed in summary fashion in Section 5.4 of the Program EIR/EIS. These discussions are based on information derived from the multi-tiered analysis described above.</p> <p>The analysis results support the conclusions that the growth inducing effects and indirect impacts are similar between the HST design options at the program level of analysis. This similarity arises due to the facts that:</p> <ul style="list-style-type: none"> ▪ Travel time changes between key areas are minimal between the HST design options; ▪ Population and employment totals are similar in each county; and ▪ The extent of potential induced growth from any HST alignment or station option is actually quite small when compared to the background growth that is projected to occur between 2002 and 2035 under the No-Project Alternative.

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	<ul style="list-style-type: none"> Since induced growth, development densities, and market forces are substantively similar between system alternatives and HST design options, the program level conclusions related to similarities in urbanization patterns and indirect impacts between the design options are reasonable.
Standard Response 5.2.3	<p>The co-lead agencies respectfully disagree with the commenter's contention that the Program EIR/EIS does not address the magnitude or impacts of induced population and employment growth in Merced County. Section 5.3.4 (Regional and County Effects) presents and discusses detailed population, employment and urbanization results for all counties, including Merced. Table 5.4-1 on Page 5-28 shows that the total growth (including induced growth) with the HST would result in less total farmland loss in the North Central Valley than the growth under the Modal or No Project Alternatives. More detailed background data, methodology, and results are available in the technical report on economic growth effects⁴.</p> <p>Municipal services and pressure on public resources are issues for local governments and local planning, specifically the General Plan and planning related to development project approvals. See also standard response 5.2.1, above. Local jurisdictions are responsible for assuring that adequate water, schools, and other municipal services are available to accommodate expected growth. State planning law provides for local jurisdictions to update their general plans periodically to reflect changing conditions, and recently enacted legislation requires local governments to link planning for large developments with planning for water supplies. (SB 610 and SB 221 (2001).) The growth inducement analysis in Section 5 provides information on the projected change in population, employment and urbanization that could occur with the HST. The generation of this information during the program-level evaluation should be helpful to local communities as they update their General Plans to address expected growth, including by planning for increased land use densities. Local communities determine the timing and content of General Plan updates to accommodate growth. The induced growth results presented in Section 5 assume the existence of adequate public services including water, schools and utilities. In some areas, water supply and availability of municipal services may be a constraint on growth. To the extent that these services and resources are not available to serve additional growth, the induced growth in those communities would be less than reported in the Program EIR/EIS.</p>

⁴ *Economic Growth Effects of the System Alternatives for the Program Environmental Impact Report/Environmental Impact Statement – Final Report*; Cambridge Systematics, Inc.; July 2003. This report is available from the High-Speed Rail Authority, and has been posted on the HSRA website since March 29, 2004.

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Standard Response 5.2.4	<p>The co-lead agencies respectfully disagree with the contention that the technical report on economic growth effects⁴ was not made available for public review. The technical report was posted to the HSRA web site on March 29, 2004 and has been available continuously since that time. The technical report was referenced in Section 5 and listed in Section 12 (at page. 12-37) of the Draft Program EIR/EIS. The report was also available by contacting either of the co-lead agencies.</p> <p>The co-lead agencies respectfully disagree with the commenter's contentions that the entire growth inducement analysis was conducted at a large geographic scale and that it fails to analyze interactions across the subregions used for analysis. The analysis used a variety of geographic scales, each of which was appropriate to the specific analysis element. The analysis focused on economic similarities at a regional level, and forecasted economic changes that might occur in each region from the system alternatives, because that is the scale at which economic activities tend to cluster and interact over long time periods. Population and employment growth were then allocated to each county within a region since, within a program level analysis that is the scale at which existing and future data are available from third-party data suppliers. These county-level numbers were then converted to urbanization and secondary impacts at the geographic scale of hectare grids, since that was the most appropriate scale for understanding small-scale environmental impacts. Analysis results at each geographic scale support the conclusion that the relative difference in economic growth and indirect impacts was relatively small between system alternatives, particularly when compared to differences between existing conditions and the year 2035 No-Project conditions.</p> <p>The entire purpose of conducting the economic evaluation at the regional and county levels was to specifically account for the interaction that occurs across "subregional definitions." The methodology directly addressed travel and economic interaction within and between regions and counties. By then allocating the county level population and employment growth to urbanization projections at the hectare scale, the study was able to provide a robust analysis of potential growth inducement and secondary impacts that was appropriate to a program level EIR/EIS.</p> <p>Travel demand model results that were used for the growth inducement analysis indicate that the accessibility barriers that exist between Northern Central Valley housing and Bay Area jobs are largely overcome with the planned and programmed highway improvements included in the No Project Alternative. This result means that the Northern Central Valley is an attractive housing location for Bay Area job seekers under all system alternatives, and the major differential effect of the HST Alternative is to shift the future housing location for a few "supercommuters" from San Joaquin and Sacramento Counties (under the No Project and Modal Alternatives) to Stanislaus and Merced Counties (under the HST Alternative). The net effect of the HST</p>

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	<p>Alternative is a housing shift within the San Joaquin Valley rather than a housing shift from the Bay Area to the Central Valley. The analysis and evidence requested by the commenter is fully provided in Section 4.3.2 of the technical report on economic growth effects.</p> <p>The co-lead agencies acknowledge that California Farmland Mapping and Monitoring Program (CFMMP) maps were not available for some areas in Kern County. The mapping tool was prepared initially for the National Biological Survey and used previously for the California State Housing Study. As part of this prior work, satellite and census data were used to create an existing urban footprint for these areas. Also these areas are very far removed from a potential HST station site in Bakersfield, and therefore the expected level of urbanization would be nearly identical for all the system alternatives in these more remote areas. Although Kern County was considered in an identical way to other counties in these studies, Kern's base mapping was drawn, in part, from secondary sources that were not used or needed for the other counties.</p> <p>Data in Table 5.3-5 of the Program EIR/EIS indicate that Los Angeles County has about .56 jobs per person as a countywide average under the 2035 No-Project Alternative. The 15,000 additional jobs and 25,000 additional people in Antelope Valley (including Santa Clarita and Palmdale) under the HST Alternative equates to 0.6 job per person, which is higher than the countywide average under the No-Project Alternative. This result suggests that the induced population growth in the Antelope Valley is generated by the expected job growth within the Antelope Valley, and is not necessarily related to long-distance commuting. Further detailed tables and discussion regarding the similarities between the HST alignment options are included in Section 4.2 of the technical report on economic growth effects.</p> <p>Station locations have not been established for the Program EIR/EIS at a project level of specificity. The Program EIR/EIS indicates that issues such as air quality, traffic, and developmental pressure are closely linked to station-specific details such as local access routes, interface with local transit, at-grade versus structure parking, land availability, etc., all of which would be related to specific station sites. Program level design is not refined enough to further describe the potential impacts at specific stations beyond the information provided in the Program EIR/EIS.</p> <p>Information on development experience around HST stations in other cities was described in Section 3.3 of the technical report on economic growth effects. This potential for growth concentration was directly incorporated into the induced growth and indirect impacts analysis at a level appropriate to a program level EIR/EIS. See also response 5.2.1.</p>

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Standard Response 5.2.5	<p>The conclusions regarding potential beneficial effect on land use and growth are based on the detailed data in Table 5.3-7 and associated discussion on Page 5-22 of the Draft Program EIR/EIS. Benefits are mentioned, but potential growth itself is not treated as either beneficial or detrimental, which is consistent with the CEQA Guidelines. More detail on the analysis and results were included in the technical report on economic growth effects⁵, which was posted to the HSRA web site on March 29, 2004 and has been available continuously since that time. The technical report was referenced in Section 5 and listed as a reference in Section 12 of the Draft Program EIR/EIS. The report was also available by contacting either of the co-lead agencies.</p> <p>Standard response 5.2.4 addresses issues related to the geographic scale of the analysis, and for issues related to impacts of specific alignments and stations.</p> <p>Sections 5.3.1.B and 5.3.1.C of the Program EIR/EIS summarize all of the data sources and considerations that went into the growth inducement analysis. Further detail on these data and methods are included in the referenced technical report on economic growth effects.</p> <p>The growth analysis directly estimated the commuting issues mentioned by the commenter. The analysis estimated the likely population shifts from the accessibility benefits conferred by each system alternative, considering issues such as differential housing costs and the time/cost for using each system alternative to commute from the Central Valley to either Southern California or the San Francisco Bay Area. Part of this time/cost issue for the HST Alternative involves egress and access between the HST station and the actual employment location. The HST system will have a very limited number of stations in the Bay Area and Southern California, requiring that users transfer to another transit mode to access any employment site or destination that is beyond walking distance from one of the HST stations. An analysis prepared for the I-580 BART to Livermore Study⁶ showed that only 30% of job destinations in the Bay Area for Altamont Pass commuters would be accessible via BART and local transit (only 4% are within walking distance of a BART station). The co-lead agencies believe that the analysis results in the Draft Program EIR/EIS accurately reflect constraints that: 1) a limited number of HST stations; 2) the limited number of jobs that are within walking distance of potential HST stations; and 3) the relatively limited access to job sites via a transfer to local transit</p>

⁵ *Economic Growth Effects of the System Alternatives for the Program Environmental Impact Report/Environmental Impact Statement – Final Report*; Cambridge Systematics, Inc.; July 2003. This report is available from the High-Speed Rail Authority, and has been posted on the HSRA website since March 29, 2004.

⁶ *I-580 Bart to Livermore Study – Final Report*; Cambridge Systematics, Inc.; July 2002; page 6-8.

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	<p>will place on potential growth in long-distance commuting with the HST Alternative. These results are further validated by the large growth projections in the Central Valley for the No-Project and Modal Alternatives. Taken together, the results accurately portray that long-distance commuting is currently occurring out of the Central Valley using automobile transportation and is expected to increase at roughly the same rate under any of the system alternatives, including No Project. See also response 5.2.6.</p> <p>Major transportation investments can facilitate new growth. However, the No Project and Modal Alternatives include major transportation investments that will increase accessibility between the Central Valley and Bay Area. The HST Alternative is not expected to lead to a significant increase in commute accessibility between Central Valley homes and Bay Area jobs compared to the other system alternatives.</p> <p>Conclusions regarding development efficiency and densification are based on an analysis of recent historical development patterns in each county. Density assumptions within this analysis were consistent between system alternatives. The year 2035 analysis timeframe is beyond the horizon year of most General Plans in the state. Therefore, recent development history (which is based in part on implementation of prior and current general plans) is the best available proxy for the development density that could occur in each county out to 2035. Appendices G and H of the technical report on economic growth effects provide detail on how assumed densities were arrived at for each county.</p> <p>Travel demand model results used for the growth inducement analysis indicate that the accessibility barriers from Northern Central Valley housing to Bay Area jobs are largely overcome with the planned and programmed highway improvements included in the No Project Alternative, and the major effect of the HST Alternative is to shift the future housing location for a few long-distance commuters from San Joaquin and Sacramento Counties (under the No Project and Modal Alternatives) to Stanislaus and Merced Counties. The net effect of the HST Alternative is a housing shift within the San Joaquin Valley rather than a housing shift from the Bay Area to the Central Valley. Since these long-distance commuters would be relocating to take advantage of the high line-haul speeds of the HST, it is reasonable to expect that they would be unlikely to locate in remote low density areas that would require a long time for station access. Therefore, we believe that the HST Alternative will not lead to a change in the demand for Ranchette development (as compared to the No-Project Alternative) because:</p> <ul style="list-style-type: none"> ▪ Ranchettes are not likely to be located within a reasonable driving distance of an HST station; ▪ Individuals living in outlying ranchettes would be unlikely to use HST on a daily basis due to the relatively long station access time compared to people residing within an urbanized area near an HST station; and, ▪ The long station access time required for a low density ranchette would offset the line haul travel time

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	<p>benefit of an HST Alternative.</p> <ul style="list-style-type: none"> ▪ The analysis in the EIR/EIS must consider potential growth in the context of existing general plans. While it would be speculative to make assumptions regarding specific General Plan or land use amendments, it is reasonable to expect that land use densities will increase due to market forces and that increased densities will ultimately be reflected in amended general plans in some form. The analysis for the Program EIR/EIS was based on the likely market conditions (i.e. population and employment growth), recent experience in development densities in each county potentially served by the HST, and empirical research of station-area development as documented in Section 3.3 of the technical report on economic growth effects. The analysis did not speculate as to which regulatory regimes may exist in the future. Please also see response to Comment O047-1 and response to Comment O047-2. ▪ The conclusions regarding potential beneficial effect are based on the detailed data in Table 5.3-7 and associated discussion on Page 5-22, and are more fully described in the technical report on economic growth effects. ▪ The analysis of urbanization and secondary impacts was based on a hectare-level analysis of likely development in specific grids. The process considered the growth development pressures on specific hectare grids based on adjacency to existing development, parcel accessibility, and physical characteristics and constraints in the parcel and its neighbors. ▪ Please see standard response 5.2.1 in regards to the potential for HST to increase the demand for second homes. <p>The co-lead agencies would like to point out that the majority of proposed HST station sites are in areas that are currently urbanized, and that none of the preferred station sites are in “unserved and relatively remote areas”. Furthermore, the Draft Program EIR/EIS directly analyzed the differential effects of locating HST stations in rural areas versus urbanized areas. Section 5.3.5 of the Program EIR/EIS summarizes potential effects of shifting the station location to outlying and rural areas, and several portions of Section 5.4 provide detailed quantification of the potential indirect impacts of locating HST stations in outlying areas. Further detail on the growth impacts of outlying stations are presented in Sections 4.2 and 5.2 of the technical report on economic growth effects. The Authority focused its identification of preferred potential station locations at downtowns and planned or existing urbanized areas, not remote and undeveloped areas. All the station sites recommended are multi-modal transportation hubs. Please also see standard response 2.1.12.</p> <p>The indirect and induced effects, of personal income growth on demand for services, the types of services demanded, and aggregate growth and development are analyzed in the REMI model that was used in the</p>

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	<p>analysis.</p> <p>Results presented in Section 5 of the Program EIR/EIS indicate that there are no significant impacts related to indirect effects of growth inducement at the program level of analysis. Please see standard response 5.2.1.</p> <p>Empirical research, as documented in Section 3.3. of the technical report on economic growth effects, underlies the conclusion that market forces do support a modest increase in density around an HST station. The densities assumed for this analysis are consistent with the levels that can demonstrably be achieved through market forces, and the sensitivity analysis documented in Section 5.5.1 of the Program EIR/EIS indicates that land use and zoning changes can lead to further densification; however, the further densification was not included in the assessment of indirect impacts. Furthermore, Attachment E, Metropolitan Transportation Commission Memorandum (MTC), submitted with these comments provides information on MTC policy and a study proposal related to land use densities and transit ridership. It neither provides any empirical research or conclusion, nor does it address the issue of whether "land use and zoning changes must be put in place to achieve" higher densities. See standard response 5.2.1. The Authority can recommend strategies, pursue agreements with local governments, condition its decisions on specified pre-requisites of local plan amendments related to stations and HST system alignment, and even sponsor legislation, but it does not exercise authority over the local planning and land use development, and it cannot itself compel or adopt local general plan changes under existing law.</p>
Standard Response 5.2.6	<p>The Authority prefers not to pursue Los Banos as a site for a potential HST station. Therefore, the potential Los Banos station site would not be advanced to project level analysis.</p> <p>The analysis in the Program EIR/EIS directly estimated the "supercommuting" potential. The analysis estimated the likely population shifts from the accessibility benefits conferred by each system alternative, considering issues such as differential housing costs and the time/cost for using each system alternative to commute from the Central Valley to either Southern California or the San Francisco Bay Area. Part of this time/cost issue for the HST Alternative involves egress from the HST station to an actual employment location. The HST system will have a very limited number of stations in the Bay Area and Southern California, requiring that users transfer to another transit mode to access any employment site or destination that is beyond walking distance from one of the HST stations. An analysis prepared for the I-580 BART to Livermore Study showed that only 30% of job destinations in the Bay Area for Altamont Pass commuters would be accessible via BART and local transit (only 4% are within walking distance of a BART station). The co-lead agencies believe that the analysis results in the Program EIR/EIS accurately reflect the constraints that: 1) a limited number of HST stations; 2) the limited number of jobs that are within walking distance of potential</p>

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	HST stations; and 3) the relatively limited access to job sites via a transfer to local transit will place on the potential for supercommuting with the HST Alternative. These results are further validated by the large growth projections in the Central Valley for the No-Project and Modal Alternatives. Taken together, the results accurately portray that supercommuting is currently occurring out of the Central Valley using automobile transportation and is expected to increase at roughly the same rate under any of the system alternatives, including No Project. Please also refer to response to Comment O047-1.
Standard Response 6.1.4	<p>Available studies (the CRA technical studies referenced in the Program EIR/EIS and other HST feasibility studies such as the FRA Commercial Feasibility Study, 1996) indicate HST ridership potential is highly dependent on the total trip time and the number of transfers. The HST service would result in travel times between Downtown Los Angeles and Downtown San Francisco of about 2 hours 35 minutes, without a transfer. The HST trip between San Francisco (Transbay Terminal) and San Jose (Diridon Station) would be as little as 30 minutes, whereas the current Caltrain service takes 58 to 96 minutes between San Francisco (4th and King) and San Jose (Diridon Station). Of the 43 daily Caltrain trains (in each direction) only some are express ("baby bullet") trains providing the quickest travel times (58 minutes), whereas many of the trains are local service with travel times about 96 minutes. HST service to the downtowns of major cities such as San Francisco, would greatly increase the connectivity and accessibility of the HST system, and enable the system to directly serve major regional transit hubs such as the Transbay Terminal and San Francisco International Airport (SFO).</p> <p>The Authority investigated the ridership and revenue impacts of terminating the HST system in San Jose as part of its June 2000 Business Plan. Forecasts by Charles River Associates concluded that the HST system would lose about 17% of its ridership and 18% of its revenue if the HST system terminated in San Jose (Corridor Evaluation, December 1999). The Authority concluded that service to San Francisco and/or Oakland is essential to the feasibility of the HST system. The purpose and need for the proposed HST system includes providing a reliable mode of travel that links the major metropolitan areas of the state, including an interface with the largest commercial airports in the state, and delivers predictable and consistent travel times. However, the Authority in consultation with the FRA, has identified a broad preferred corridor between the Bay Area and the Central Valley containing a number of feasible route options (please see standard response 6.3.1). Future studies would consider: (1) how and where the HST alignment from the Bay Area would connect with the HST alignment in the Central Valley; (2) how and where the HST alignment would enter the Bay Area and would connect to Bay Area termini; (3) the location of stations within these segments (please also see Chapter 6A of the Final Program EIR/EIS document).</p>

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Standard Response 6.1.5	<p>The HST system would be a state-of-the-art, electrified, fully-grade separated system with controlled access to prevent intrusions. Use of the Caltrain alignment would require full grade separation and appropriate fencing, as well as additional tracks. As was noted in the Draft EIR/EIS, “shared-use improvements in this corridor would potentially result in safety and service improvements for Peninsula commuters and potentially improve automobile traffic flow at rail crossings and reduce noise impacts, since the grade-separated system could eliminate trains blowing warning horns throughout the alignment” (page 2-29).</p> <p>The Program EIR/EIS identifies mitigation strategies and areas for subsequent analysis. If the HST proposal is advanced, specific mitigation measures would be identified, analyzed and approved as part of the future project-specific environmental reviews that would be needed prior to implementing the HST system.</p>
Standard Response 6.2.1	<p>The Authority in consultation with the FRA, has identified a broad preferred corridor between the Bay Area and the Central Valley containing a number of feasible route options (please see standard response 6.3.1). Future studies would consider: (1) how and where the HST alignment from the Bay Area would connect with the HST alignment in the Central Valley; (2) how and where the HST alignment would enter the Bay Area and would connect to Bay Area termini; (3) the location of stations within these segments (please also see Chapter 6A of the Final Program EIR/EIS document).</p>
Standard Response 6.2.2	<p>The Authority has identified the Hayward Line to I-880 (which primarily utilizes the median of I-880 between Fremont and San Jose) as the preferred alignment between Oakland and San Jose. However, the Authority in consultation with the FRA, has identified a broad preferred corridor between the Bay Area and the Central Valley containing a number of feasible route options (please see standard response 6.3.1). Future studies would consider: (1) how and where the HST alignment from the Bay Area would connect with the HST alignment in the Central Valley; (2) how and where the HST alignment would enter the Bay Area and would connect to Bay Area termini; (3) the location of stations within these segments (please also see Chapter 6A of the Final Program EIR/EIS document). Two alignment options were considered between San Jose and Oakland, the Hayward Line/I-880 and the Hayward Branch/Niles/Mulford Line. Both options would use the Hayward Line freight railroad right-of-way (also used by the “Capitol” intercity Amtrak service) between Oakland and Union City. At Union City, the Hayward Line/I-880 option would diverge to the median of Interstate 880 (on an aerial structure) to bring the alignment to San Jose and a tunnel under a small lake in Fremont Central Park. This option is estimated to cost about \$140 million more than the Hayward Line/Niles/Mulford option (about 4% of the cost between Oakland and San Jose) but would have higher ridership potential and considerably less potential environmental impact. Authority staff recommends</p>

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	<p>identifying the Hayward Line/I-880 as the preferred alignment option between Oakland and San Jose.</p> <p>The Hayward Line/Niles/Mulford option would require tight curves that would greatly limit operational speeds between Union City and Newark – with express travel times at least 6 minutes longer than the Hayward Line/I-880 option. This alignment also goes through the Don Edwards National Wildlife Refuge, which would result in considerably higher potential for environmental impacts (hydrology and water resources, biology and wetlands, visual impacts, and Section 4(f) and 6(f) parkland impacts) than the Hayward Line/I-880 alignment option.</p> <p>MTC and the City of Newark support the Hayward Line/I-880 alignment option. Caltrans District 4 commented that there would be significant construction stage impacts if the alignment encroaches onto the I-880 median between Fremont and San Jose, and there is a need for a detailed analysis of potential construction impacts during project level environmental review.</p>
Standard Response 6.2.3	<p>The Authority in consultation with the FRA, has identified a broad preferred corridor between the Bay Area and the Central Valley containing a number of feasible route options (please see standard response 6.3.1). Future studies would consider: (1) how and where the HST alignment from the Bay Area would connect with the HST alignment in the Central Valley; (2) how and where the HST alignment would enter the Bay Area and would connect to Bay Area termini; (3) the location of stations within these segments (please also see Chapter 6A of the Final Program EIR/EIS document). Please see standard response 6.2.2.</p>
Standard Response 6.2.5	Please see standard response 6.2.3.
Standard Response 6.2.6	Please see standard response 6.2.2.
Standard Response 6.3.1	<p>The Authority and the FRA have determined that additional study will be needed in a separate program EIR/EIS in order to identify a preferred alignment alternative for the northern mountain crossing and that Altamont alignment options will be considered in that separate program EIR/EIS. A broad corridor is recommended containing a number of feasible route options. This broad corridor is generally bounded by (and includes) the Pacheco Pass (SR-152) Corridor to the south, the Altamont Pass (I-580) Corridor to the north, the BNSF Corridor to the east, and the Caltrain Corridor to the west. The Authority would not pursue alignment options through Henry Coe State Park, and the station option at Los Banos in future studies.</p> <p>The San Jose to Merced segment involves the crossing of the Diablo Range Mountains that separate the Central Valley from the San Francisco Bay Area. This is one of the most difficult geographic features encountered by the proposed HST system and is an area of controversy. The Authority has determined that a</p>

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	<p>next-tier Program EIR/EIS process be initiated to focus on the selection of a preferred alignment between the Central Valley and the San Francisco Bay Area.</p> <p>Many comments have been received urging further evaluation of the Altamont Pass as a potential alignment option. Federal agency comments and others have noted the limitations of available resources information regarding the Diablo Range mountain crossing. In addition, comments have been received indicating that other undeveloped areas in the northern mountain crossing outside the current boundaries of Henry Coe State Park contain sensitive resources. A next-tier Bay Area to Merced Program EIR/EIS should consider alignment options between (and including) the Pacheco Pass Corridor (SR-152) to the south, and the Altamont Pass Corridor (I-580) to the north. Section 2.6.8F of the Draft Program EIR/EIS is <u>not</u> included in the Final Program EIR/EIS.</p> <p>Many comments have also been received opposing potential HST alignments through (or under) Henry Coe State Park (which includes the Orestimba State Wilderness Preserve). The Authority has determined that alignment options through Henry Coe State Park should <u>not</u> be pursued in any subsequent environmental analysis.</p> <p>HST alignments through Henry Coe State Park would have greater potential environmental impacts than alignment options through the Diablo Range that would avoid the park to the north. Alignments through Henry Coe State Park would have the highest impacts to Section 4(f) and 6(f) Resources (both long-term and construction impacts). In addition, the considerable amount of public and agency input in regards to these alignment options has been overwhelmingly opposed to any construction through Henry Coe State Park.</p> <p>The Authority has also determined that the Pacheco Pass alignment HST station at Los Banos (Western Merced County) should <u>not</u> be pursued in subsequent environmental reviews because of low intercity ridership projections for this site, limited connectivity and accessibility, and potential impacts to water resources and threatened and endangered species. Although the City of Los Banos supports the Pacheco Pass alignment with a potential station at Los Banos, considerable public and agency opposition has been expressed about a potential Los Banos HST station because of its perceived potential to result in growth related impacts. This station option (as well as the Visalia/Hanford option) has low ridership potential compared to other potential station locations investigated by the Authority. In 2020, this station is forecast to serve a population of only about 88,000 (forecast to only have between 155,000 and 190,000 annual total intercity boardings and alightings by 2020). This is expected to slightly reduce the capital costs of the HST system and reduce potential environmental impacts at Los Banos.</p> <p>The next-tier Program process would include addressing such issues as HST design options, costs, operational</p>

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	<p>issues (such as frequency of service and the potential for splitting trainsets), design and cost for a Dumbarton HST bridge crossing, potential environmental impacts, and will consider additional ridership data to the extent that it is available.</p> <p>Section 3.18 of the Final Program EIR/EIS addresses construction methods and the potential for construction impacts in general. In addition, each section of Chapter 3 also outlines specific design features that will be applied to the implementation of the HST system to avoid, minimize, and mitigate potential impacts. However, construction impacts are highly site-specific in nature. These issues will be addressed in detail during subsequent project level environmental review, based on more precise information regarding location and design of the facilities proposed (e.g., specific alignment, right of way corridor width, elevated, at-grade, cuts and fills, etc.). The detail of engineering associated with the project level environmental analysis will allow the Authority to further investigate ways to avoid, minimize and mitigate potential impacts.</p>
Standard Response 6.5.1	<p>The Authority and the FRA have concluded that a next-tier Program EIR/EIS process should be initiated to focus on the selection of a preferred alignment between the Central Valley and the San Francisco Bay Area (please see standard response 6.3.1). This further study will be required to determine how much of the Caltrain alignment between San Francisco and San Jose will be included as part of the preferred HST alignment and whether a Mid-Peninsula station site should be recommended. The co-lead agencies look forward to working with agencies, organizations, and the public throughout the next-tier Program EIR/EIS for the Central Valley to Bay Area and subsequent more detailed project-specific studies should the HST proposal move forward.</p>
Standard Response 6.7.1	<p>A potential link to San Jose International Airport would be at Santa Clara less than 3 miles north of the potential downtown San Jose station. Because the downtown San Jose (Diridon) station site would provide sufficient connectivity to San Jose airport for the foreseeable future the Authority has identified a preferred HST alignment that would have <u>no</u> potential HST station at Santa Clara. The Authority identified Millbrae (SFO) as the HST airport connector station on the San Francisco peninsula.</p>
Standard Response 6.8.1	<p>The West Oakland site and the 12th Street/City Center site would both provide good connectivity with BART and would have similar potential for environmental issues. The Authority has concluded that there should be continued investigation in future tiered environmental reviews of both the West Oakland and the 12th Street/City Center sites as potential locations for a terminus station in Oakland.</p>

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Standard Response 6.10.1	Please refer to standard response 6.3.1, potential HST station sites to serve Southern Santa Clara County could be further investigated as part of future studies. Selection of station names is beyond the scope of this program EIR/EIS process.
Standard Response 6.11.1	Please refer to standard response 6.3.1.
Standard Response 6.12.1	<p>The Authority has identified the UPRR alignment option as the preferred alignment between Sacramento and Stockton. However, due to CWA Federal regulations, because the UPRR alignment option has more potential impacts to waters and biological resources, the CCT alignment option is included in the HST alternative to be further evaluated in project level environmental review.</p> <p>The UPRR is a more direct route with slightly shorter travel times (1 min less) and construction costs (\$150 million) than the CCT alignment option. The CCT is a recently abandoned freight corridor, so there is less ambient noise in this corridor than the UPRR. In addition, the CCT has more land designated for residential and agricultural use than the UPRR alignment. The UPRR is a heavily used freight rail corridor and the grade separation improvements along this alignment would result in potential reductions in noise levels from existing conditions as a result of the elimination of horn noise and gate noise from existing services. While the Sacramento region is supportive of a statewide HST system serving Sacramento, there is substantial community opposition to HST using the CCT alignment. The City of Elk Grove (which is bisected by both alignments) supports HST on the UPRR and opposes the use of the CCT alignment as a result of potential community impacts.</p> <p>The technical analysis of these options showed generally higher potential impacts to biological and water resources for the UPRR alignment as compared to the CCT alignment. The UPRR option was determined to have 4.3 acres more potential impacts to wetlands, 25 acres more potential impacts to habitat, 20 more potential sensitive species, 800 linear feet more potential impacts to streams, and 0.56 acres more potential impacts to lakes than the UPRR alignment, but would have 34 - 88 acres less potential impacts to floodplains. Most of the stream crossings under the UP alignment are due to canal crossings, not river crossings, which are generally smaller and could be realigned if necessary. In addition, introduction of the HST service on the abandoned CCT right-of-way could result in greater interference of wildlife movement in comparison with the UPRR alignment, which is a heavily used freight corridor.</p>

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Standard Response 6.12.2	The Authority has identified the UPRR alignment option as the preferred alignment between Sacramento and Stockton. However, due to CWA Federal regulations, because the UPRR alignment option has more potential impacts to waters and biological resources, the CCT alignment option is included in the HST alternative to be further evaluated in project level environmental review. For more details see standard response 6.12.1.
Standard Response 6.13.1	<p>However, the Authority has identified the BNSF alignment as the preferred option for HST service between Stockton and Merced, Merced to Fresno, and Fresno to Bakersfield. The BNSF is the preferred alignment since it would have fewer constructability issues, potential impacts, and costs than the UPRR alignment, and would serve the Castle Air Force Base station site to serve Merced. The BNSF alignment avoids most of the urban areas between Stockton and Merced and would have fewer property and noise impacts than the UPRR (with Modesto Express Loop) option. Moreover, while the BNSF alignment would follow existing rail-right-of-way and minimize the potential for environmental impacts, the UPRR alignment would require a new express loop with impacts to agricultural land around Modesto. The BNSF alignment is estimated to be considerably less costly (\$400 million) than the UPRR alignment since it minimizes urban area construction and does not require an express loop around Modesto. Impacts throughout this segment could be avoided/minimized if the HST system could share the existing freight rail right-of-way. If the HST project is to move forward, the co-lead agencies would seek agreements with BNSF to utilize the existing rail right-of-way to the greatest extent possible.</p> <p>Existing Amtrak intercity rail service would effectively provide linkage to the proposed HST system, since Amtrak has stations at more numerous cities than the proposed HST system would have, but the proposed HST station sites would either be at or connect with (Sacramento, Modesto, and Bakersfield) or would likely become station sites (Fresno, and Merced) for Amtrak's San Joaquin service.</p>
Standard Response 6.14.1	The Authority has identified the BNSF alignment as the preferred option for HST service between Merced and Fresno. The BNSF avoids most of the urban areas between Merced and Fresno and is the preferred alignment since it would have substantially fewer constructability issues, fewer potential noise and property impacts, and is estimated to cost about \$400 million less the UPRR alignment. Impacts throughout this segment could be avoided/minimized if the HST system could share the existing freight rail right-of-way. If the HST project is to move forward, the co-lead agencies would seek agreements with BNSF to utilize the existing rail right-of-way to the greatest extent possible. The BNSF alignment option assumes new alignment transitions just south of Merced and just north of Fresno, and utilizes the UPRR alignment through Fresno.

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Standard Response 6.15.4	<p>The Authority has identified the BNSF alignment as the preferred option for HST service between Fresno and Bakersfield. The BNSF avoids most of the urban areas between Fresno and Bakersfield and is selected as the preferred alignment because it would have fewer constructability issues, would have fewer potential noise and property impacts, and is estimated to cost between \$590-800 million less the UPRR alignment options. In order to maintain high-speed service on the BNSF alignment, construction of a new HST alignment around Hanford would be needed.</p> <p>Potential environmental impacts throughout this segment could be avoided and minimized if the HST system could share the existing freight rail right-of-way. If a decision is made to proceed with the proposed HST system, the Authority would seek agreements with BNSF to utilize the existing rail right-of-way to the greatest extent feasible.</p> <p>Due to concern over the potential bisecting of the communities south of Fresno, the City and County of Fresno, Fresno COG, and the cities of Fowler, Selma, and Kingsburg are opposed to the UPRR alignment as proposed and suggest if the UPRR alignment is selected that a trench be considered to reduce the impacts to these smaller communities. The California Department of Parks and Recreation has stated a preference for the UPRR alignment between Fresno and Bakersfield. Parks and Recreation notes potential visual, noise and vibration impacts to the Colonel Allensworth State Historical Park, located south of Hanford along the BNSF alignment. The Authority recommends comprehensive study to avoid and/or minimize the potential impacts to these sensitive areas as part of project level environmental review.</p> <p>Considerable public and agency comments were received supporting the UPRR alignment with a Visalia Airport station stop, including comments from the Tulare County Association of Governments and the cities of Visalia and Tulare. The Authority identified the BNSF alignment as the preferred option for the HST services between Fresno and Bakersfield. However, the Authority has directed additional study of an alignment option between Fresno and Bakersfield, or variations thereof, to serve a potential Visalia station located in an existing and/or planned urbanized area, to be conducted. The Authority will work with local, state, and federal agencies as well as the public in carrying out these planning studies. Should a new feasible and practicable alignment option be identified through these planning studies that is likely to be less damaging to water and biological resources, the alignment would be fully evaluated during the project level environmental review. Future scoping efforts would consider additional alignments during project-level review.</p>

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Standard Response 6.19.1	<p>The Authority has identified both the Castle Air Force Base (AFB) and the Downtown Merced station options for further investigation as a potential HST station site to serve Merced County. The Castle (AFB) site is about 7 miles (11 km) northwest from downtown Merced, but would provide the best access to the developing UC Merced campus via a new highway alignment along Bellevue Avenue. This option would require an additional two-track alignment loop line be constructed to serve Castle AFB station site. While this option would have less connectivity and accessibility to downtown Merced, it would have fewer construction impacts (since only two tracks would be required through downtown Merced). USEPA has expressed concern over loop concepts in the Central Valley, noting that the additional tracks would increase potential environmental impacts; therefore, a potential station along the BNSF alignment will be considered at the project-specific level. The Castle AFB option is supported by the City and County of Merced, UC Merced, and the Merced High-Speed Rail Committee. Comments were also received from federal and state elected officials as well as local governments and organizations in support of a maintenance hub at Castle AFB.</p> <p>The Downtown Merced site is located at the city center and the transit hub of Merced, has good access to SR-99, and would have higher connectivity than the Castle (AFB) site. However, the Downtown Merced option would have greater construction issues and higher construction costs, due to the need for four tracks needed through downtown Merced to accommodate express services.</p>
Standard Response 6.20.1	<p>The Authority has identified the Downtown Fresno Station option as the preferred HST station to serve the Fresno area. For more details see standard response 6.20.5.</p>
Standard Response 6.20.5	<p>The Authority has identified the BNSF alignment within Fresno County and Madera County as preferred, with the exception of the segment through the City of Fresno where the UP alignment would be preferred.</p> <p>The Authority has identified the Downtown Fresno option as the preferred HST station option to serve Fresno County, and the surrounding areas. The downtown Fresno station site has high connectivity and accessibility, with good freeway access and good connections to bus transit. This option is the preferred HST station site of the City of Fresno, Fresno County, and Fresno COG.</p> <p>The Authority has identified the direct option through Fresno as preferred, which does not include an express loop outside of Fresno. This direct option would have high construction issues since four tracks will be needed through much of Fresno to accommodate express services, and a considerable amount of the alignment through Fresno would be on aerial structure. However, this option would have fewer potential environmental impacts (farmland impacts, severance impacts, biological resources, wetlands), and is estimated to be at least \$700 million less costly than the option with the express loop (since the express loop</p>

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	<p>requires 22-26 additional miles of alignment construction [35-42 km]). An analysis of the Fresno loop line option suggests that the primary benefit of moving the high-speed mainline (express tracks) outside the urban area would only be a 12-16% reduction in potential noise impacts. Moving the loop line further west would only add to the additional miles of alignment needed and increasing potential farmland impacts and impacts to natural resources.</p> <p>A Fresno HST station located in the outlying area west of SR-99 was considered but rejected in screening evaluation, as indicated in Chapter 2 of the Program EIR/EIS. A west of SR-99 station would result in increased potential impacts on agricultural lands and natural resources, would have high potential for severance impacts and would have the potential to contribute to development sprawl and to increase development pressure on agricultural lands. It would also have less ridership potential and poorer connectivity and accessibility than a downtown Fresno station.</p>
Standard Response 6.21.1	<p>The Authority has identified the BNSF as the preferred alignment between Fresno and Bakersfield and has not recommended the development of a station at Hanford or Visalia. Please also see standard response 6.15.4.</p> <p>The Authority concluded that the existing Amtrak intercity rail service should link Kings County and Tulare County to the HST system and identified a preferred HST alternative that has no station to directly serve Hanford (the Hanford site is the only station option for Tulare/Kings counties on the recommended BNSF alignment). The Hanford/Visalia station options would have the lowest ridership potential of all the potential stations investigated by the Authority. In 2020, a Hanford or Visalia station is forecast to have only between 140,000 and 160,000 annual total intercity boardings and alightings by 2020. In addition, as a result of not having the Hanford HST station would eliminate the alignment through Hanford, resulting in cost savings of about \$420 million plus less potential environmental impact since the HST alignment would avoid the Hanford urban area.</p>
Standard Response 6.23.1	<p>The Authority has identified the alignment through the SR-58/Soledad Canyon Corridor (Antelope Valley) with an HST station at Palmdale as the preferred option for crossing the Tehachapi Mountains between the Central Valley and Southern California. Although the longer Antelope Valley alignment would add about 10 minutes to express service travel times between northern and southern California and have less intercity ridership potential (trips between regions) than the I-5 alignment option, it would have fewer potential environmental impacts, it would be less subject to seismic activity and have considerably less tunneling and thereby have fewer constructability issues, and would increase connectivity and accessibility.</p> <p>The Antelope Valley alignment is estimated to have more potential to impact cultural resources than the I-5</p>

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	<p>alignment options, and slightly more potential impact on biological resources. The Antelope Valley alignment would have a lower overall potential for water-related impacts because the potential impacts are related to the relatively small seasonal streams in Soledad Canyon and it would not encroach on any lakes. The Antelope Valley option would also have less potential impacts to wetlands and non-wetland waters than the I-5 options⁷. In addition, the Antelope Valley option was forecast to have less impacts on urbanized land and farmland conversion than the I-5 options – because the I-5 options would result in more growth in the Central Valley. However, the most significant difference in regards to potential environmental impacts between the Antelope Valley option and I-5 alignments is in regards to major parklands. The Antelope Valley alignment would not go through major parks. In contrast, the I-5 options would potentially impact Fort Tejon Historic Park, Angeles and Los Padres National Forests, Hungry Valley State Vehicular Recreation Area, Pyramid Lake and other local parks.</p> <p>The Antelope Valley alignment traverses less challenging terrain than the I-5 options, which would result considerably less tunneling overall (13 miles [21 km] of tunneling for the Antelope Valley option versus 23 [37 km] miles for I-5 options), and considerably shorter tunnels (maximum length of 3.4 miles [5.5 km] for the Antelope Valley option versus two tunnels greater than 5 miles [8 km] for the I-5 options) which would result in fewer constructability issues. Although the Antelope Valley option is about 35 miles longer than the I-5 alignment options, it is estimated to be slightly <u>less</u> expensive to construct as a result of less tunneling through the Tehachapi Mountains. In addition, due to its more gentle gradient, geology, topology and other features, the SR-58/Soledad Canyon Corridor offers greater opportunities for using potential HST alignment variations, particularly through the mountainous areas of the corridor, to avoid impacts to environmental resources. In contrast, the more challenging terrain of the I-5 Corridor greatly limits the ability to avoid sensitive resources and seismic constraints. The alignment optimization system (<i>Quantm</i>) that was utilized to identify and evaluate approximately 12 million alignment options for each mountain crossing could only find one practicable alignment option through the Tehachapi Mountains for the I-5 Corridor.</p> <p>Submittals by the City of Palmdale (oral testimony by U.C. Berkeley Professor Ashraf Mahtab at the April 13, 2004 public hearing and technical report by Geodata that is included as an attachment to the City of Palmdale's written comments) show additional seismic hazards relating to the I-5 alignment that further differentiate these options from the Antelope Valley alignment. These submittals suggest that since the I-5</p>

⁷ An error was found on page 6-52 of the Draft Program EIR/EIS. For the Antelope Valley alignment under Biological Resources, waters should read 65,562 linear feet. The error was also made in Appendix 3, on page 3.15-D-8, Soledad Canyon Corridor, perennial non-wetland jurisdictional waters should read 146 linear feet as stated in the *Bakersfield to Los Angeles: Biological Resources Technical Evaluation Report (January 2004)*

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	<p>alignment options follow the San Gabriel fault for over 20 miles and cross through the area where the San Andreas and Garlock faults meet, they would have greater seismic hazard and constructability issues than the Antelope Valley option. The Draft Program EIR/EIS rated both the I-5 options and the Antelope Valley alignment as having “High” potential for seismic hazards and active fault crossings, but did not differentiate between them. After reviewing the information submitted by the City of Palmdale, the Authority has concluded that while the ratings for the alignments should not change, they concur that there are additional seismic hazards and risks for the I-5 alignment options from paralleling the San Gabriel fault, and also from traversing the “triangle” where the San Andreas and Garlock faults meet.</p> <p>The Antelope Valley option would provide direct service to the Palmdale/Lancaster area, which increases the connectivity and accessibility of the HST network. The Antelope Valley is the fastest growing area in Los Angeles County and currently regional population forecasts estimate the Antelope Valley population could exceed 1 million by the year 2020. The HST system would also provide connectivity to Palmdale Airport and Metrolink commuter rail service.</p> <p>Public and agency support for the Antelope Valley option is strong in Los Angeles County because of the increased connectivity and accessibility it would provide for the Antelope Valley. Agencies which have indicated support for the Antelope Valley alignment include: the City of Los Angeles, the County of Los Angeles, Los Angeles County Metropolitan Transportation Authority (LAMTA), Los Angeles Department of Transportation, Southern California Association of Governments (SCAG), the City of Palmdale, City of Lancaster, County of Kern, Kern Council of Governments, and the City of Bakersfield.</p> <p>The comments from the US Environmental Protection Agency (USEPA) on the Draft Program EIR/EIS (dated 8/31/04) stated concern regarding potential impacts to the Santa Clara River through the Soledad Canyon portion of the Antelope Valley alignment and noted that potential impacts could be avoided by more closely aligning the HST route with existing transportation networks. The Draft Program EIR/EIS defines Soledad Canyon as “a relatively wide corridor area that includes both the SR-14 and UPRR alignments between the Antelope Valley and Santa Clarita” (page 2-73). Future study of the Antelope Valley alignment should include an option that closely follows the SR-14 through Soledad Canyon as an avoidance option for potential impacts to the Santa Clara River. The Authority and the FRA will continue to work cooperatively with the USEPA to seek a resolution to their concerns regarding potential impacts to Soledad Canyon.</p>
Standard Response 6.23.4	Please see standard response 6.23.1.

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Standard Response 6.24.2	<p>The Authority has identified the MTA/Metrolink as the preferred option for HST service between Sylmar and Los Angeles. Between Burbank and Los Angeles Union Station, the MTA/Metrolink refers to a relatively wide corridor within which alignment variations will be studied at the project level. It is recommended because it would have less potential for environmental impact, and would have less constructability issues than the Combined I-5/Metrolink alignment option.</p> <p>The MTA/Metrolink option would have fewer potential impacts to local and regional parks than the Combined I-5/Metrolink option. The Combined I-5/Metrolink alignment option has the potential to impact Griffith Park, Elysian Park and the Cornfield property. The Combined I-5/Metrolink route would also potentially impact slightly more biological resources than the MTA/Metrolink route.</p> <p>A considerable number of comments have been received regarding potential impacts to the Taylor Yard and Cornfield properties owned by California State Parks. The MTA/Metrolink alignment investigated would potentially impact the periphery of Taylor Yard property, whereas the I-5/Metrolink alignment would bisect the Cornfield property. Taylor Yard and the Cornfield site were not identified in the Section 4(f) analysis (public parks and recreation) of the Draft Program EIR/EIS because at the time of the analysis in 2002, neither site was identified as an existing park in the sources reviewed for the analysis. However, since that time, the California Department of Parks and Recreation has initiated general plans for these two facilities.</p> <p>The MTA/Metrolink corridor is an existing rail corridor used by Metrolink commuter services and Amtrak intercity services. Use of the MTA/Metrolink corridor offers opportunities to mitigate potential HST impacts (e.g. by putting the alignment underground, on aerial structure, or by aligning it away from sensitive resources). The HST design option assumes that the alignment would be along San Fernando Road adjacent to Taylor Yards (primarily to avoid curves). The MTA/Metrolink design option along the existing Metrolink right-of-way around the Taylor Yards area should also be considered in future studies. In contrast the I-5/Metrolink alignment option would bisect the Cornfield property with a new, at-grade alignment. Constructing the I-5/Metrolink alignment underground through the Cornfield property would not be practicable because of the need to transition to an aerial structure to serve the LAUS HST station site.</p> <p>The MTA/Metrolink and Combined I-5/Metrolink options are expected to have similar construction costs. However, the Combined I-5/Metrolink could require approximately 2 miles (3.2 km) of tunneling (including segments under Silver Lake and Elysian Park), and therefore is considered to have more constructability issues than the MTA/Metrolink option. The combined I-5/Metrolink alignment is opposed by the City of Burbank because they believe it would have high impacts to established residential neighborhoods from the</p>

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	<p>use of high-elevated structures over existing freeway overpasses through Burbank.</p> <p>During the project-level review, in the Sylmar – Los Angeles segment, as well as other highly urbanized areas throughout the system, the Authority will work closely with the potentially affected communities on mitigation measures to avoid, reduce, and/or include feasible measures to mitigate potential impacts to local communities. The Authority will seek to identify new feasible and practicable alignment variations less damaging to parklands, water and biological resources as well having less community impacts, to evaluate during the project level environmental review. The Authority will work with local, state, and federal agencies as well as the public (including local neighborhoods) in carrying out future project-level studies.</p>
Standard Response 6.25.1	The Authority has identified the Palmdale Airport/Transportation Center as the preferred HST station to serve the Antelope Valley. This station maximizes options for intermodal connectivity. It is close to Palmdale airport, with the opportunity for convenient shuttle or people-mover service, and it is the Metrolink station for Palmdale and a hub for local bus services.
Standard Response 6.27.1	The Authority has identified the Burbank Metrolink Media City (Downtown) station as the preferred HST station option to serve the Burbank/Glendale area and the San Fernando Valley. It would be an aerial structure and would be less costly and easier to construct than the Burbank Airport site (which would have to be constructed in a trench). The Burbank Metrolink Media City station site would offer higher connectivity to the Burbank area. This station site is in downtown Burbank, and would provide a direct connection to the Metrolink regional commuter rail service, a hub for bus transit in the Burbank area, and good access to Burbank Airport. The Burbank Metrolink Media City station would be about 2.4 miles (3.9 km) from the Burbank Airport terminal, as compared to the airport access provided by the Burbank Airport site, which is about 1.6 miles (2.6 km) from the airport terminal.
Standard Response 6.28.1	The Authority has identified L.A. Union Station as the preferred HST station location for downtown Los Angeles. The LAUS HST station would be an elevated structure constructed over the current Metrolink and Amtrak tracks. LAUS is the transit/rail transportation hub of southern California and would have the highest connectivity and accessibility for serving the Los Angeles metropolitan area. LAUS is the primary destination for the Metrolink Commuter rail services, the Los Angeles Metro Red Line, the Pasadena Gold Line, the Amtrak Surfliner service, and the regional bus transit services. The existing LAUS option would have limited potential impacts on the environment. This option is the preferred by the City of Los Angeles Department of Transportation and LOSSAN Rail Corridor Agency.

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Standard Response 6.29.3	<p>Comparing the two alignments between Los Angeles and Pomona, the UPRR Riverside/Colton option provides for a much better connection to LAUS and to Northern California (since it connects to LAUS from the south), and it has been identified as the preferred alignment between Los Angeles and the Inland Empire.</p> <p>The UPRR Colton line enters LAUS from the north, requiring a direction reversal using LAUS as a stub-end station for trains traveling from the Inland Empire to northern California, increasing travel times between these markets by at least 10 min if LAUS is used as the HST station site for Los Angeles. Between LAUS and March ARB, the options would have similar potential for environmental impacts. The Riverside/Colton option would have the least potential costs, about \$1.2 billion less than the Colton Line option.</p> <p>For the segment between Ontario and March ARB, the UPRR Colton Line (used by both the UPRR Riverside/Colton and UPRR Colton alignment options) provides considerably higher speeds/faster travel times (6 min less between L.A. and San Diego) than the options to directly serve San Bernardino. The direct link to San Bernardino is estimated to cost \$700 million more (than either the Riverside/Colton option or the Colton option) and would not avoid or substantially reduce potential environmental impacts.</p> <p>The Authority has identified a multimodal HST station at Ontario Airport as the preferred station to serve San Bernardino County.</p>
Standard Response 6.31.4	<p>The Authority prefers continuing to investigate both the Carroll Canyon and Miramar Road alignment options between Mira Mesa and San Diego. These options would enable the HST system to directly serve downtown San Diego, whereas the I-15 to Qualcomm option would terminate about 8-miles from the city center at the Qualcomm Stadium (20 minutes by light rail). SANDAG, NCTD, MTDB, Caltrans District 11, and the City of San Diego all support direct HST service to downtown San Diego via the Inland Empire (I-215/I-15 Corridor).</p> <p>The Qualcomm Stadium concept would be about \$140 million less to construct than the Carroll Canyon option, and \$70 million less than the Miramar Road option, but would not provide the same level of connectivity to downtown San Diego as the other alignment options. Although the I-15 option terminating at Qualcomm Stadium was forecast to have higher intercity ridership (350,000 more for 2020), the options that would directly serve Downtown San Diego would provide better connections to the regional transit system and airport.</p> <p>The Carroll Canyon alignment option would have similar potential environmental impacts as the Miramar Road alignment option. However, the Carroll Canyon option would avoid and minimize potential impacts to</p>

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	<p>Miramar Naval Air Station as compared to either the Miramar Road or I-15 alignment option. As compared to the I-15 option, the Carroll Canyon and Miramar Road options would have less potential impacts to parklands and vernal pools (U.S. Fish and Wildlife Service, "Vernal Pools of Southern California, Draft Recovery Plan", 1997), and less potential for growth-induced impacts, but more potential visual, cultural, and floodplains impacts.</p> <p>The United States Marine Corps has raised concern regarding the Miramar Road option which is directly adjacent to the Miramar housing complex and "sensitive habitats" and has noted that any efforts related to the proposed HST system that would limit or impact on the Marine Corps ability to perform its mission would be opposed. The City of San Diego commented that building the alignment below grade should be considered from Old Town to Downtown San Diego. SANDAG commented that the I-15 corridor would be attractive to long-distance commuters and has requested that the Authority consider a future partnership to look at details for an intercity/commuter service in the I-15 Corridor. However, the USEPA recommends avoiding placement of a HST route in canyons due to the "significant" permitting challenges such alternatives may face as a result of potentially large amounts of cut and fill, and increased potential for erosion, sedimentation, and other stream impacts. The U.S. Department of the Interior (USDOI) has also raised concerns regarding a potential HST alignment through Carroll Canyon open space which is within the city of San Diego's MSCP preserve and an important feature in the San Diego regional conservation strategy. Further project-level study of both the Carroll Canyon and Miramar Road alignment options would provide necessary information to avoid and minimize potential adverse impacts to the natural environment.</p>
Standard Response 6.35.1	<p>The Authority has identified the Murrieta station site as the preferred HST option to serve the Temecula and Murrieta area of Riverside County. The Murrieta Station site would have convenient access to I-15 and I-215. The City of Murrieta submitted comments in support of an HST station in Murrieta.</p>
Standard Response 6.36.1	<p>The Authority has identified an Escondido HST station as the preferred station location to serve Escondido and the I-15 corridor as the preferred inland alignment in San Diego County for the proposed HST system. However, the Authority has identified the Escondido at SR-78/I-15 as the preferred site.</p> <p>The Escondido Transit Center option would have better connectivity (within 1/8 of a mile of the transit center, and could link to Bus Rapid Transit and the Sprinter light rail transit service) and is the strongly preferred HST station option of the City of Escondido, SANDAG and NCTD. However, serving the Escondido Transit Center would require leaving the I-15 alignment and tunneling under the Centre City Parkway which would be more difficult and costly (estimated at over \$900 million more) to construct than the I-15 station option and the Escondido Transit Center would not avoid or substantially reduce potential environmental impacts. The I-15</p>

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	<p>station option is considered to be moderately compatible with the surrounding land uses, and would have few environmental concerns.</p> <p>The Authority staff recommends identifying the I-15 station option as the preferred station option to serve Escondido, the I-15 corridor and North/East San Diego County since it is considerably less costly to construct and would be easier to construct than tunneling under Escondido. However, ultimate locations and the configurations of stations cannot be determined until the more detailed project-level environmental processes. Should the HST project move forward, project level environmental review will involve continued work with the City of Escondido and the region to further define the HST alignment and potential sites for the I-15 station.</p>
Standard Response 6.39.1	<p>The Authority has concluded that a direct HST service to LAX not be part of the initial statewide HST network. The HST system would be connected to LAX and Western Los Angeles County by local transportation (shuttle, regional transit, or the automobile). A direct HST link to LAX requires a costly spur line with very limited maximum speeds that would have lower ridership potential than HST links to the San Diego (via the Inland Empire) and to Orange County.</p> <p>The proposed HST network would serve the Inland Empire and San Diego using the I-215/I-15 corridor, and it is also recommended that the initial HST network serve Orange County via the LOSSAN alignment. Direct HST service to LAX would require an additional spur line south of Los Angeles Union Station (LAUS). Having the HST system to split in three different directions south of LAUS would considerably reduce the potential frequency of service for each of these corridors. Moreover, since a majority of the HST trains would be continuing from LAUS to either San Diego or Orange County, it is likely that many HST passengers wanting to reach LAX would still require a transfer at Union Station.</p> <p>The MTA Harbor Subdivision rail right-of-way alignment is a little over 15 miles long and would cost about \$1.9 billion to construct, with an additional \$340 million needed for a sub-terrain station at LAX. Curves along the alignment would severely restrict speed throughout the alignment (average speed would be about 70 mph) resulting in a 13-minute travel time LA Union to LAX. This low-speed urban alignment could function very appropriately as a commuter rail line, which would be a feeder service to the HST system, or it could be considered for a future extension of the HST system once the initial network was operational.</p> <p>San Diego County Association of Governments (SANDAG) supports a direct link to LAX via the I-15 Corridor, and NCTD supports a direct link to LAX via Orange County. However, in Los Angeles County and the SCAG region, airport planning has been focused on trying to shift future growth away from the severely capacity constrained LAX to satellite airports such as Ontario, Burbank and Palmdale. Comments were received from Friends of the Green Line advocating that the MTA Harbor Subdivision right-of-way should be used for a</p>

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	future northern extension of the Green Line to serve local/regional transit. In addition, the Los Angeles Department of Transportation suggests moving the existing Green Line to the Harbor Subdivision and using the I-105 right-of-way (existing Green Line) for HST. The Southern California Association of Governments (SCAG) commented that they are planning a regional Maglev system. The SCAG Maglev system as currently envisioned would link LAUS and LAX as part of the regional Maglev network.
Standard Response 6.39.5	Please see standard response 6.39.1.
Standard Response 6.40.1	The Authority has identified the LOSSAN Corridor HST to Irvine as the preferred option for the HST service connection to Orange County. The phasing of the HST system is beyond the scope of this program environmental process. Should the HST project move forward, the phasing of the system would be determined as a part of future studies. Please also see standard response 10.1.7.
Standard Response 6.40.6	The Authority has identified the LOSSAN Corridor HST alignment option to Irvine as the preferred alignment between Los Angeles and Orange County. The Pacific Electric alignment was considered but rejected from further consideration as part of this program environmental process.
Standard Response 6.41.1	<p>The proposed HST system would extend no further south than Irvine (as a result of environmental constraints along the coast and in coastal communities between South Orange County and San Diego). For this region, non-electric "conventional" rail improvements to the existing state-supported "Surfliner" (Amtrak) service between Irvine and San Diego had been considered to provide feeder service to the HST.</p> <p>The Authority has been working in a partnership with California Department of Transportation (Caltrans) Division of Rail concerning the potential "non electric" improvements for the existing rail corridor connecting Los Angeles, Orange County, and San Diego (LOSSAN). Caltrans has relied upon the Authority's technical studies to issue the LOSSAN Rail Improvements Draft Program EIR/EIS [State clearinghouse #2002031067]. Following publication of the HST Draft Program EIR/EIS, the Authority concluded that implementation of "non-electric" improvements in the Irvine to San Diego portion of the LOSSAN corridor for intercity service be identified as the responsibility of Caltrans Division of Rail and that the Authority take <u>no</u> further action at this time regarding LOSSAN conventional improvements between Irvine and San Diego. Therefore, in the Final Program EIR/EIS, there is no analysis presented for potential non-electric "conventional" rail improvements as part of the HST alternative (please see Chapter 6A and Section 2.6.9 of the Final Program EIR/EIS).</p> <p>The Authority has forwarded comments regarding conventional improvements to Caltrans during the public comment period for the LOSSAN Rail Improvements Draft Program EIR/EIS.</p>

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Standard Response 6.41.2	Please see standard response 6.41.1.
Standard Response 6.42.1	<p>The proposed HST system would extend no further south than Irvine (as a result of environmental constraints along the coast and in coastal communities between South Orange County and San Diego). For this region, non-electric “conventional” rail improvements to the existing state-supported “Surfliner” (Amtrak) service between Irvine and San Diego had been considered to provide feeder service to the HST.</p> <p>The Authority has been working in a partnership with California Department of Transportation (Caltrans) Division of Rail concerning the potential “non electric” improvements for the existing rail corridor connecting Los Angeles, Orange County, and San Diego (LOSSAN). Caltrans has relied upon the Authority’s technical studies to issue the LOSSAN Rail Improvements Draft Program EIR/EIS [State clearinghouse #2002031067]. Following publication of the HST Draft Program EIR/EIS, the Authority concluded that implementation of “non-electric” improvements in the Irvine to San Diego portion of the LOSSAN corridor for intercity service be identified as the responsibility of Caltrans Division of Rail and that the Authority take <u>no</u> further action at this time regarding LOSSAN improvements between Irvine and San Diego. Therefore, in the Final Program EIR/EIS, there is no analysis presented for potential non-electric “conventional” rail improvements as part of the HST alternative (please see Chapter 6A and Section 2.6.9 of the Final Program EIR/EIS).</p> <p>The Authority forwarded comments regarding conventional improvements to Caltrans during the public comment period for the LOSSAN Rail Improvements Draft Program EIR/EIS.</p>
Standard Response 8.1.1	<p>The Authority and the FRA believe that they have adequately informed the public about the availability of the Draft Program EIR/EIS document and properly noticed and adequately held public hearings during the public comment period. The Draft Program EIR/EIS was released for public review and comment on January 27, 2004 and noticed in the federal register on February 13, 2004. The initial public comment period was scheduled to end May 14, 2004, but due to public requests, it was extended to August 31, 2004. Responsible agency and the public oral and written comments submitted by August 31, 2004 will be addressed and responded to in the Final Program EIR/EIS.</p> <p>Notification packets announcing the availability of the Draft Program EIR/EIS were mailed on February 6, 2004 to federal cooperating agencies, other affected agencies and elected officials. The federal cooperating agencies received an announcement letter from the Authority, a hard copy of the Draft Program EIR/EIS, and a CD copy of the document with appendices. 140 other affected public agencies received an announcement letter from the Authority, an Executive Summary and a CD copy of the document with appendices. 282 elected officials received an announcement letter from the Authority, a Summary Brochure and a CD copy of</p>

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	<p>the document with appendices.</p> <p>To further publicize the release of the draft environmental document, press briefings were held in San Francisco, Los Angeles and Fresno. The Authority Board Chairperson, Joseph Petrillo, provided an overview of the project and the Draft Program EIR/EIS. Public Officials from each region made remarks expressing their views on the proposed project. Several media representatives attended each briefing.</p> <p>The general public was informed of the Draft Program EIR/EIS release through distribution of an announcement of the document's availability to the project mailing list. The announcement also provided the details for submitting comments by mail or fax and announced that public hearings will be held in the future. The mailing list contains approximately 10,000 statewide contacts including: federal, state, and local elected officials; federal, state and local agency representatives; chambers of commerce; environmental and transportation organizations; special interest groups; media; private entities; and members of the public. The mailing list is based on the database developed during the scoping phase. The mailing list is on file with the Authority and is available for viewing.</p> <p>The Program EIR/EIS was also made available for viewing and downloading at the Authority's website, www.cahighspeedrail.ca.gov. Comments were accepted directly from the website as well. The website also provided the opportunity to request a CD ROM of the document.</p> <p>The announcement and website listed the 32 statewide libraries with a hard copy of the document available for review. Participating libraries were located in the following cities: Anaheim, Bakersfield, Burbank, Escondido, Fremont, Fresno, Gilroy, Irvine, Los Angeles, Merced, Modesto, Mountain View, Norwalk, Oakland, Oceanside, Ontario, Palmdale, Palo Alto, Riverside, Sacramento, San Clemente, San Diego, San Francisco, San Gabriel, San Jose, Santa Clarita, Stockton, Sylmar, Temecula, and Tulare.</p> <p>The release of the Draft Program EIR/EIS was also announced through a display ad distributed in 16 statewide newspapers. The display ads were published on Friday, February 13, 2004 in the following newspapers: <i>Sacramento Bee</i>, <i>Daily Republic</i>, <i>Oakland Tribune</i>, <i>San Francisco Chronicle</i>, <i>San Jose Mercury</i>, <i>Modesto Bee</i>, <i>Merced Sun Star</i>, <i>Fresno Bee</i>, <i>Bakersfield Californian</i>, <i>Los Angeles Times</i>, <i>Orange County Register</i>, <i>Antelope Valley Press</i>, <i>The Press-Enterprise</i>, <i>North County Times</i>, <i>San Diego Tribune</i>, and <i>Stockton Record</i>.</p> <p>The Authority held a total of seven public hearings to present the Draft Program EIR/EIS and to receive public comments. Originally, five public hearings were scheduled, but with the extension of the public comment period to August 31, 2004, two more public hearings were planned. A court reporter was present at each of the public hearings to record oral comments. At each public hearing, oral comments could be made during</p>

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	<p>the “public testimony” portion of the meeting or during the open house portion of the meeting to the court reporter at the “public comments” table. Oral comments on the Draft EIR/EIS were only accepted during the seven public hearings.</p> <p>The public was notified of the first five public hearings through an announcement that provided the public hearing locations and schedule. The announcement was mailed on March 12, 2004 to the project mailing list (list is described in the “Document Availability” section).</p> <p>The two additional public hearings were announced through a Notice Postcard mailed on May 13, 2004 to the project mailing list.</p> <p>The public hearings were also announced through a second display ad distributed in 16 statewide newspapers. The display ad for the first five public hearings was published on Friday, March 19, 2004 and the ad for the two additional public hearings on May 10 and 12. The same newspapers were used as with the Notice of Availability display ad (listed in the “Document Availability” section).</p> <p>Each of the five initial public hearings started at 3:00 PM and ended at 8:00 PM. The hours were selected to facilitate participation by the public. From 3:00 to 4:00 PM there was an informational open house with exhibit boards available for viewing and project staff present to answer questions and discuss issues. Formal public testimony began at 4:00 PM. Authority Board Chairperson Joseph Petrillo, facilitated the public testimony. Other Board Members, Mehdi Morshed, Executive Director of the Authority and David Valenstein, FRA Representative (at selected meetings only) were present to listen to comments. The open house resumed once all public testimony was received.</p> <p>The public hearings were scheduled as follows:</p> <ul style="list-style-type: none"> ▪ Sacramento – Tuesday, March 23, 2004 ▪ Los Angeles – Tuesday, April 13 2004 ▪ San Francisco – Thursday, April 15, 2004 ▪ San Diego – Tuesday, April 20, 2004 ▪ Fresno – Wednesday, April 28, 2004 <p>The two additional public hearings were held from 1:00 PM to 3:00 PM, all of which was public testimony. Exhibit boards were available and project staff present to answer questions and discuss issues. Chairperson Joseph Petrillo facilitated the public testimony and other Board Members and Mehdi Morshed were present to listen to comments.</p>

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	<p>The two additional public hearings were scheduled as follows:</p> <ul style="list-style-type: none"> ▪ San Jose – Wednesday, May 26, 2004 ▪ Los Angeles – Wednesday, June 23, 2004 <p>At each public hearing, speaker cards were available for public testimony. Individuals who wished to testify, submitted a speaker card and were then called in turn by the facilitator. Individual comments were time limited to provide equal opportunity for all to comment. A court reporter was present and recorded all the oral comments. Individuals were also able to make oral comments directly to the court reporter once the public testimony session had ended. Comment sheets were available for submitting written comments.</p>
Standard Response 8.1.7	Acknowledged. The Authority will participate with MTC in the planning study funded by Regional Measure 2 and in evaluating coordination of the proposed HST system with local and regional rail systems in the Bay Area.
Standard Response 8.1.16	<p>The public and agency involvement program that was conducted as part of the program environmental review process was designed to comply with the requirements of CEQA and NEPA for a program level document. Chapter 8 "Public and Agency Involvement" of the Program EIR/EIS document describes the public and agency involvement efforts conducted in the preparation of the Program EIR/EIS. Should the HST proposal move forward, extensive public outreach will be provided for more detailed project specific environmental studies.</p> <p>The Notice of Preparation (NOP) for this Program EIR/EIS was released April 6, 2001, and the Notice of Intent (NOI) was published in the Federal Register on May 2, 2001. The scoping process was followed by a systematic screening analysis to define and narrow the range of alternatives to be considered in the Program EIR/EIS. However, consideration of potential impacts on the environment from a proposed HST system started as early as 1994 with the High Speed Rail Commission. The Authority started feasibility studies and community outreach in 1998 to identify a wide range of technology and corridor alternatives.</p> <p>The Draft Program EIR/EIS was released for public review and comment on January 27, 2004 and noticed in the federal register on February 13, 2004. The initial public comment period was scheduled to end May 14, 2004, but due to public requests, it was extended to August 31, 2004. The comment period ended August 31, 2004.</p> <p>Notification packets announcing the availability of the Draft Program EIR/EIS were mailed on February 6, 2004 to federal cooperating agencies, other affected agencies and elected officials. To further publicize the</p>

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Standard Response 10.1.1	The Draft Program EIR/EIS, and the supporting technical documents, were placed on the Authority's website with the intent to make it easier for the public to review and comment on the documents. We believe the "Comment on the EIR/EIS" page (shown below) is located in the most logical and prominent portion of the website (under the "Draft EIR/EIS").
Standard Response 10.1.2	The various sections for the Program EIR/EIS document are saved as Adobe PDF files using Acrobat Version 6.0. If you had trouble opening/printing the files, it is likely that your Adobe Reader is for an earlier version of Acrobat. To get a free upgrade for the Adobe Reader for Acrobat Version 6.0 please visit the Adobe website (www.adobe.com), and click on the button the reads "Get Adobe Reader". The Authority's website states that to view some of the documents posted Adobe Acrobat Reader is required and gives the information where to download a free version.
Standard Response 10.1.7	The investigation and determination of the HST project phasing is beyond the scope of this program EIR/EIS process and not part of this Program EIR/EIS document. Should the HST proposal move forward, project phasing will be determined after further, more detailed evaluation. For potential station area and traffic impacts, the Authority and the FRA believe that the full statewide "high-end" ridership forecasts used to analyze potential environmental impacts would result in higher ridership/impacts than any potential initial (partial) segment that may be constructed. The considerations governing what constitute workable HST segments and the order in which they should be phased are discussed as part of the Authority's "Draft Implementation Plan" released in May 2005 (available on the Authority's website at www.cahighspeedrail.ca.gov).

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Standard Response 10.1.14	<p>The Authority is committed to avoiding impacts to Native American resources to the extent feasible and practical through careful alignment design and selection. As part of future project specific studies, the Authority and FRA will develop procedures for fieldwork, identification, evaluation, and determination of potential effects to cultural resources in consultation with SHPO and Native American tribes (see Section 3.12.5 of the Final Program EIR/EIS). The Authority and FRA will continue to work with Native American tribes in all subsequent phases of planning and construction of the HST system. Please also see standard response 3.12.1.</p> <p>The involvement of Native American representatives as part of future project-specific studies would be discussed and addressed as needed during project-level consultations and the development of the cultural resources Section 106 Compliance-Agreement Document (e.g., an MOA). Appropriate monitoring procedures would be specified in project-level reviews.</p> <p>Native American consultation as part of this Program EIR/EIS process is summarized in Sections 3.12.1B and 3.12.2C of the Final Program EIR/EIS. Subsequent to the release of the Draft Program EIR/EIS, two additional workshops were held with Native American tribes (March 24, 2004 in Los Banos, and April 14, 2004 in Riverside).</p>